Clinical Demonstrations on PHTHISIS.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton.

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LECTURE I.

GENTLEMEN,—I know of no subject more difficult of clinical illustration than phthisis. This is partly due to a shifting pathology, which must be followed if we are to keep pace with the increasing knowledge of the day. It also arises from the difficulty of illustrating living cases by post-mortem appearances, and this again is due to the rapid changes undergone by the morbid product in the lung. These changes, as you are aware, are partly chemical and partly vital, and the life of tubercle is short, although the life of the patient may be long. Still, it is so highly necessary to rational clinical teaching that we should associate pathological changes of structure with the living phenomena of disease, that before proceeding to the wards I have endeavoured to arrange the pathology of the day with the natural classes of phthisis. In this I have been partially successful. Yet there are many cases in practice of which we cannot say with certainty to what form of phthisis they have originally belonged, or what morbid influence has given rise to them. If I were to clear up this uncertainty by a dogmatic classification, I should deceive you and myself, but if I can throw the several varieties of this multiform disease into some natural groups, I shall have helped you to a better understanding of that which you see in the wards.

Let me therefore briefly review the leading points of the teaching of the last thirty years about consumption. In my early days the doctrines of Laennec ruled Western Europe. The grey granulations, semi-transparent, disseminated, or grouped in the lung, were the essence of the disease. They were considered as new formation, not old tissue. From their inherent tendency to degenerate and decay they became caseous—what we now call fatty degeneration,—softened and ulcerated the lung, and formed a cavity more or less large in which all the lung tissues were merged and destroyed. Laennec was opposed by Broussais, who advocated the inflammatory origin of this as of most diseases. Heat of opposition and strong argument are not, as you are aware, likely to beget changes of opinion, and the two rival theorists did not modify their views and strike a balance, whereby we might perhaps have been gainers. At all events, Laennec's theory had this merit, that it harmonised remarkably with clinical experience or the living forms of disease.

But in this country there have always been independent observers, and Addison, Stokes, and others recognised the fact that in many cases of phthisis inflammatory products played a chief part, while in many others no tubercle at all was to be found. A more careful microscopical examination has done much for us, unsettled some of our views, and, without doubt, created uncertainties; but it has also clearly proved that some of our forms of tubercle, and of those, too, which ulcerate and break up the lung, originated in inflammatory action, and consist of inflammatory products. Still later Burdon-Sanderson, who I am proud to think was one of our colleagues, advanced the opinion that tubercle, or the *materies morbi* in consumption, is only a hyperplasia or overgrowth of the natural structure found in all lymphatic glands, in the lung surrounding the vessels and air-cells and entering into the interlobular tissue; found also, as we know, in the omentum, peritoneum, and spleen. This he calls *adenoid*, and he holds that it is subject to degenerative changes, may liquefy, soften, and be expectorated, or become caseous without softening, and dry up or become cretaceous. It will do all, in fact, which the so-called tubercle is known to undergo. It is capable of another change also—it is convertible into or causes the hypergrowth of *fibrous or fibroid tissue*, which is found naturally in the lung. This fibroid plays an important part in all old cases of slow phthisis. It extends through the lung, surrounds and strangles the bronchioles and vessels, furnishes walls to cavities, and branches through the lung in all directions to the pleura. It binds together and consolidates all tissues and contracts the lung, causing the chest-walls to fall in. Of this form of disease I shall have occasion to speak again. Out of these several pathological conditions arises a somewhat natural classification, of which we shall avail ourselves. But first we must have a definition of phthisis which will fit all cases. We will call it a disease which ulcerates the lung and wastes the tissues of the body. It is not merely a lung disease either in antecedent history or in actual symptoms. Local and constitutional disorder coexist, and if there be such a thing as a purely local disease, it is surely not phthisis. Therefore it is not to be studied with the stethoscope only, nor to be appreciated by symptoms alone. To define the local disorder more minutely, we will say that it is a deposit or thickening in the lung, blocking its tissues, with great proneness to change or liquefaction, fatty degeneration or caseation. Till you get this there is no phthisis. Add coexistent irritative fever and waste of body, nutrition interfered with, and till you get this there is no phthisis. The diagnosis lies in the union of signs and symptoms. Auscultation may tell the amount and degree of lung disease, but not the vital cause nor the state of the patient. We are too proud of our stethoscopes! The most careful study of symptoms will fail at times to discover phthisis, although a practised eye will often tell the stage of established disease without examination.

We will take in order the forms of *phthisis of inflammatory origin*, and afterwards the *lymphatic*, and finally *fibroid* phthisis. But, first, I must say a few words about *acute miliary tuberculosis*. You do not often see it in these wards, for its rapidity and our delay in admitting patients exclude it. Patients die of this form of disease in a few weeks, I had almost said days. I need not therefore detain you long about it, for it is intractable and uninfluenced by treatment, and always fatal. There are two forms. 1. The *acute*, with rapid softening of a deposit which is spread through both lungs. A high temperature and pulse denote the excessive constitutional suffering. The physical signs spread over both sides reveal deposits and softening in its various stages at the same time. With these there are commonly gastric symptoms—red tongue, thirst, vomiting, anorexia—and delirium, which is rare in chronic phthisis, may occur before death. 2. The other form is a comparatively passive exudation, as it were, of miliary tubercle throughout both lungs which has no time to soften. But from exhaustion the patient rapidly sinks. The physical signs denote pretty uniform impaction of the lung—diminished resonance, feeble respiration, and lessened movements. I have seen this form prove fatal in three weeks, and the patient has scarcely coughed; but the temperature was high and the nervous exhaustion great. These cases, like the former, are uniformly fatal.

To facilitate our study of phthisis, I have drawn out for you a table (see next page), which will be found to include all varieties, from the lightest form of alveolar catarrh to the most advanced and chronic case. In constructing it I have had in view the modern theories, but it is not the less true that in one or other of these niches you may find all your cases in practice. The theory or the name may change, but facts remain and the often-repeated features of disease.

But first let me say that the eminent and inseparable feature of phthisis is the localisation of the disease. Stokes used to say "localised bronchitis with dulness is phthisis"; and so is localised pneumonia which does not clear up within a certain time.

The very first on our list, *simple alveolar catarrh*, derives all its importance from its being limited to one part of the lung. If spread over the whole, or over both lungs, it becomes a bronchitis. A localised alveolar catarrh has often the notoriously insidious character of phthisis. Its approaches may be unannounced. With subfebrile symptoms your patient will have slight cough, some wasting and impairment of strength. Your physical examination may or

may not detect dulness, but harsh breath-sounds, and even crackle, are soon heard. He thinks he has a cold; you are uncertain whether he has not a consumption, for the case runs on for weeks, or even months. The physical state consists in a block of the minute tubes, thence to the alveoli, which become filled with cellular products. These disintegrate, become fluid, are expectorated, and he recovers. In more severe cases, the alveoli are blocked by large granular cells, which speedily undergo fatty degeneration, and are expectorated, but the walls of the alveoli are damaged and collapse, and the disease stops here. The chest-walls fall in slightly, there is some flattening and impaired movement, and the breath-sounds are deficient. There is, indeed, a small portion of lung not breathing at all. There is no *tubercle* in this case, and the patient recovers. But alveolar catarrh may have a second termination. The cellular products of disease undergo fatty degeneration, the fluid matters are absorbed, it becomes cheesy or cretaceous, and may remain so for years. This is one form of obsolescent tubercle.

PHTHISIS.

Acute tuberculosis.
1. Passive invasion of the whole lung by miliary tubercle.
2. Progressive deposits; rapid softening.

Simple alveolar catarrh.
1. Cellular products expectorated (recovery).
2. Alveolar products soften; collapse of walls (recovery).
3. Alveolar products remain, become caseous, cretaceous (obsolescent tubercle).

Catarrhal pneumonia,
Broncho-pneumonia,
Lobular pneumonia.
Alveolar walls, lung-tissue destroyed (cavity).

Lymphatic phthisis,
Adenoid (Sanderson),
Tubercle (Laennec).
Overgrowth of lymphatic tissue; lobular pneumonia deposits; softening; vomica.

Fibroid phthisis.
Of various origin. Interstitial fibrous growth; contracted lung (chronic phthisis).

A *catarrhal pneumonia* is accompanied by a greater exudation of inflammatory products, which produce a more intense block of the lung. This is a broncho-pneumonia, or lobular pneumonia, often seen after pertussis and other acute affections of early life. It is limited to one portion of a lung. Not only the minutest bronchi, but the alveoli suffer, and their walls break down and liquefy. All tissues of the lung are ulcerated through, and what is called a "cavity" is formed. These changes are accompanied by the most violent febrile symptoms, temperatures from 101° in the morning to 104·6° in the evening, followed by excessive sweatings, and accompanied by rapid wasting of tissues. All this may cease, as you will afterwards have occasion to see, and your patient may partially recover, and a dry cavity result, or a chronic secreting cavity, or a chronic extending cavity ending in secondary deposits in the lung and progressive waste. And of these various terminations I shall show you examples. Now bear in mind that all these forms of disease—that is, alveolar catarrh (mild or severe) or catarrhal pneumonia—may exist in local parts of the lung and yet there may be no tubercle according to modern pathology. At the same time these were the very changes in the lung well described by Laennec!

We come now in our list to consider *lymphatic phthisis*, with which I have classed the *adenoid* of Sanderson and the *tubercle* of Laennec. Tubercle properly so called is, according to modern teaching, a morbid growth of the lymphatic class, a hyperplasia of gland-tissue—not a new formation, nor an extraneous product, but an overgrowth of that which was always there. For, according to Burdon-Sanderson, adenoid tissue is found normally in the follicles of lymphatics, in the spleen surrounding the Malpighian follicles, in Peyer's glands, and in the lung around the bronchial tubes and the vessels which it accompanies. It is also found under the pleura, just as it is seen in the omentum and around the vessels of the peritoneum. Cell-formations in tubercle do not differ from inflammatory exudation, nor from those normally existing in lymphatic structures. An *overgrowth under irritation* is the term now applied to this extension of adenoid growth. It consists of grey granulations in the alveolar walls, in the connective tissue, around the vessels and under the mucous membrane of the bronchi, and is vascular. Its tendencies, the changes which it undergoes, are of the last importance to us, for in them we find the history of advancing or of retrogressive phthisis. Adenoid is capable of fatty degeneration, breaks up, liquefies, is removed, just as you see in the chronic or acute suppurations of lymphatic glands; for if you watch the external glands in suppuration, you have under your eye the changes which lymphatic tissue undergoes in the lung. Again, it is capable of fibrous transformation. It is convertible into fibrous tissue, in fact, and so furnishes walls to cavities in the lung, surrounds and obliterates vessels and bronchi, binds together and contracts the lung, and, as we see in all cases of chronic phthisis, preserves life for a time by conversion of the light vesicular lung, with its immense supply of blood and ever-moving tissues, into a dense, almost impervious, mass, scarcely capable of expansion, while it narrows and obliterates the blood and air conduits, and so arrests the circulation that hæmorrhages are comparatively rare.

Burdon-Sanderson regards artificial tubercle, which, as you know, he produces in certain animals by inoculation, as an *overgrowth*, and not a new growth. And I will briefly state the results of his experiments on the rodentia in order that you may compare them with what you see in phthisis. After inoculation the lungs are found disseminated with minute nodules of lobular catarrhal pneumonia; the alveoli are choked with epithelial cells, and the alveolar walls are thickened by growth of adenoid tissue. These masses coalesce, and each one caseates in its centre, becomes opaque and soft, and disintegrates; in fact, a vomica is formed. This result of inoculation is very like, indeed, almost identical with, that which takes place in ordinary tubercle in man. I am not here going to diverge into the question of the inoculability of tubercle in man—that is another question, not yet settled; but it is quite likely that primary deposits in the lung may propagate themselves by secondary deposits, the result of a kind of inoculation. These experiments on animals are of the very highest importance, inasmuch as they are pictures of an obscure disease producible at pleasure, and a disease, too, which we have hitherto been content to refer to that ill-defined power, constitutional disorder. In the present state of our knowledge, then, it is not to be forgotten that any morbid or septic matter introduced into the blood will produce effects on the lung like tubercle, and also that hitherto only one class of animals—the rodents—appear to be susceptible of such inoculation.

But you must bear in mind that other opinions besides those of Burdon-Sanderson prevail. Williams holds that tubercle is not a mere adenoid growth, but an excessive multiplication of perishable cells, or leucocytes, such as the corpuscular lymph of Paget, and the croupous of Rokitansky. With these theories I have nothing to do now, my object being to give you intelligent clinical illustrations of phthisis, and to show you into what classes or varieties you may distribute the cases you meet with in the wards. The pathological theory may change, but the facts abide with us in indelible characters. These destructive forms of disease—the lymphatic, ordinary tuberculous, or pneumonic, including what was formerly called struma—may be fitly considered together, as they comprise most cases of ordinary phthisis.

I shall also ask your attention to still another form of phthisis, which includes several varieties. It has been called *fibrous* or *fibroid phthisis*, as it is characterised by an excessive interstitial fibrous growth. It has been considered as in itself a separate idiopathic disease, with such distinctive features as, in the opinion of some most careful observers, to entitle it to a different name and identity of its own. As I believe it to be the sequence and inevitable result of many forms of disease, and inseparable from several varieties of consumption, I must describe it to you as I have seen it, and can show it to you, as of various origin. Thus a catarrhal pneumonia attacks the fibrous stroma of the lung, or that interlobular tissue which gives sheaths to the vessels and bronchi, and which underlies the pleura. Inflammation increases its growth—*growth under irritation*; and thus the vessels and bronchi become strangled, the alveoli collapse and are surrounded, and, when cavities form, their walls are provided with a fibrous cover-

ing. Trabeculæ are left traversing the whole lung, which becomes contracted, and the side falls in and organs are displaced. In like manner all the forms of the lymphatic phthisis are attended in their more chronic stages by over-development of fibrous tissue, producing contraction of portions of lung, and hardening and blocking its tissues. Indeed, I know of no form of phthisis, excepting the acute varieties (where there is an invasion of tubercle throughout the pulmonary structures), in which the hyper-development of fibrous tissue does not occur. In the acute tuberculosis there is neither time nor (as it were) space for such overgrowth. The disease is too short, and it never reaches the period of fibrous transformation. But in the chronic forms, that which is called tubercle, or adenoid, by its very chronicity affords time and opportunity for such changes. For take the most advanced disease met with in the post-mortem room—examine that lung riddled from end to end by irregular cavities till no vesicular tissue remains in it, and what is it? Why, fibrous tissue and pigment; thickened, degenerated pleura; anfractuous cavities with more or less tough walls, obliterated vessels, and air-tubes crossed by bands of thickened tissue: all that remains, in fact, is converted fibrous stroma, without which, strong in its resistance to degenerative and ulcerative processes, there would be no lung left at all. Recognising fibrous change as the character of all chronic inflammatory and tuberculous disease, I cannot therefore teach you from this place that there is an idiopathic fibrosis of the lung which, from its very beginning, possesses separate and recognisable characters. There are, indeed, cases, which I shall hereafter show you, in which the fibrous becomes the preponderating element; but these have no features which totally separate them from ordinary chronic disease, and will be best treated as varieties with a common origin, and not as a separate class.

ON GELSEMINUM SEMPERVIRENS.

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(*Continued from p. 325.*)

THE INFLUENCE OF GELSEMINUM ON RESPIRATION.

In the experimental investigation of a drug it is often advantageous, and sometimes even absolutely necessary, to depart from a strictly logical order of procedure. In our last paper we described the effects of gelseminum on the frog's heart, and it was our original intention to have spoken in the present communication of its influence on the circulatory system of mammalia. Gelseminum, however, exerts so powerful an influence on the functions of respiration, and is so pre-eminently a respiratory poison, that a description of its action on the heart of warm-blooded animals would be almost unintelligible without a previous consideration of its influence on respiration.

We have less hesitation in departing from the orthodox order, as by so doing we are afforded an early opportunity of insisting upon a point of some practical importance. From our experiments upon reflex action it might have been supposed that the drug was indicated and would be advantageously administered in diseases such as tetanus, which are characterised by a condition of morbid excitability of the cord. We should hesitate to adopt such a mode of treatment, believing as we do that a dose sufficiently large to exert a beneficial effect upon the cord could not be administered without implicating the respiratory apparatus to such an extent as to endanger the patient's life. In illustration of the correctness of this view we may refer to a case of traumatic tetanus treated by gelseminum at the Charity Hospital in New York.* The case is very imperfectly reported, but it would appear that the liquid extract of gelseminum was given every three or four hours in doses of from twenty to thirty minims. After the first dose the muscles became relaxed, and on the following morning respiration was affected to such an extent that the patient became cyanotic, and shortly afterwards died. Death may certainly have resulted from a tetanic condition of the muscles of respiration, but the impression conveyed by the report is that the result was due rather to the treatment than to the disease.

The powerful influence exerted by gelseminum on respiration has not failed to attract the attention of previous observers. In nearly all the recorded cases of poisoning by preparations of this drug, the affection of respiration has been a prominent feature. Thus, in a man aged twenty-four, whose case is reported by Dr. Boutelle,† and of which we hope to speak in detail on a future occasion, two one-drachm doses of the liquid extract reduced the respiration in three hours to three or four in a minute. In the lower animals the affection of respiration has been observed by Dr. Bartholow,† by Dr. Ott,‡ and by Dr. Berger,§ of whose statements our experiments are in the main confirmatory.

We now proceed to speak of the effects of gelseminum on the respiration of frogs. Our observations on this point have been numerous, we having utilised for this purpose many of the animals with which we investigated the action of the drug on the nervous system. Our mode of procedure was extremely simple. We usually injected the drug hypodermically, and then placed the animal under a bell-jar and watched it, counting its respirations at frequent intervals. Our results were strikingly uniform. In every case there was a marked slowing of respiration. The rapidity with which this occurred will be best illustrated by an example:—Six observations were made on a large English frog, with the view of ascertaining its normal rate of breathing. It was then injected with ten minims of the liquid extract of gelseminum. In two minutes the breathing had become distinctly slower, in three minutes and a half its rate had been reduced by one-third, and in six minutes by one-half. At the expiration of a quarter of an hour it was only one-third of its original frequency, and in twenty minutes it was so shallow and irregular that it could be no longer counted with accuracy. Sometimes respiration would be entirely suspended for half a minute or longer, and then the animal would move, and several sharp, quick breaths would be taken in rapid succession. Respiration was distinctly affected before there was any appreciable impairment of voluntary power. In all our frogs the respiratory function was abolished long before reflex and voluntary motion had become extinct. In several instances we found that the animals would withdraw their legs when their toes were pinched, for days after the most careful observation had failed to detect the existence of any respiratory movement. The heart was frequently seen beating through the chest-wall long after the complete abolition of respiration. It must be borne in mind that in frogs cutaneous respiration plays a far more important part in the oxygenation of the blood than in mammalia, and that these animals are but little inconvenienced even by the entire removal of their lungs.

In some cases we were enabled to obtain a tracing of the respiratory movements of the frog, so as to illustrate graphically the effect of the drug. The animal was placed upon its back, and was prevented from struggling by having pinned tightly round it a piece of wetted lint. It soon appreciated the fact that it was unable to escape, and refrained from making ineffectual efforts, remaining very much in the position of a person tucked tightly up in bed. One end of a delicate glass lever was then lightly placed upon the alternately rising and falling submaxillary region, the other end being made to record its movements upon a drum covered with smoked paper, and revolving slowly by means of a simple arrangement of clockwork.

Our experiments relative to the effects of gelseminum on warm-blooded animals were twenty in number, the series including cats, rabbits, guinea-pigs, and a dog. We will, in the first place, describe the effects of a full dose of the liquid extract on a cat. The animal was a full-grown, black tom, weighing 2500 grammes (about 5½ lb.) The observation was made on a cold winter's morning, the temperature

* New York Medical Journal, 1875, p. 512.

† The Boston Medical and Surgical Journal, Oct. 1st, 1874.
† The Practitioner, Oct., 1870.
‡ The Philadelphia Medical Times, July 31st, 1875.
§ Centralblatt, No. 42, Oct. 2nd, 1875.

of the room being at the time but little above freezing point. The animal was placed under a large bell-jar, care being taken that there was free access of air. Its normal rate of respiration having been ascertained to vary from 28 to 30, it was injected under the skin of the back with ten minims of the liquid extract of gelseminum. In six minutes respiration was reduced to 12, there being no apparent impairment of muscular power. In eighteen minutes respiration had fallen to 8, and there was some loss of power, particularly in the posterior extremities, although the animal was still able to stand. At short intervals it was powerfully convulsed, particularly in the upper half of the body. At the expiration of half an hour the paralysis of the hind limbs was almost complete, and the respiratory movements were so shallow that they could be no longer counted. The convulsions still continued, and for about a quarter of an hour it seemed to us that every movement must be the cat's last. We watched the animal carefully, adopting no treatment, and gradually the breathing improved, and there was some return of voluntary power in the limbs. At the expiration of an hour from the commencement of the experiment respiration was 24, and the animal was able to stand, and even to walk a few steps. From this time the improvement progressed rapidly, and three-quarters of an hour later the breathing had not only returned to, but was slightly above, the normal, and the paralysis had entirely disappeared. The affection of respiration was the first symptom to make its appearance, and the first to pass off. A week later we gave the same cat eight minims of the drug, with the production of similar, though less marked, symptoms. In this experiment, as in the other, respiration was distinctly affected before the muscular power. When the animal was fully under the influence of the drug the breathing was extremely slow, shallow, jerking, and intermittent, expiration being apparently more affected than inspiration. On applying the ear to the chest sibilant râles could be detected. The animal completely recovered from the effects of this dose in a little less than an hour and a half. Two days later it was made the subject of a kymographic experiment which afforded us an opportunity of noticing several additional points with regard to its mode of breathing whilst under the influence of gelseminum. Twenty-five minutes after the injection of the drug it was found that respiration was very irregular, not only in frequency, but also in depth. At times it nearly ceased, becoming so shallow that it would appear that little if any air entered the chest, a condition usually succeeded by a number of deep, vigorous, and almost convulsive inspirations. This alternation was very suggestive of "brain-breathing," that is of that peculiar character of respiration which is so frequently met with in cases of tubercular meningitis and some other cerebral diseases. The method which we adopted, of first injecting the animal and then allowing it to go loose, or simply placing it under a bell-jar, is well adapted for ascertaining the general effects of the drug, but when it is desired to determine its influence on any particular function it has many disadvantages. The animal naturally moves about, and it is difficult to persuade it to remain sufficiently quiet to have its respirations taken at stated intervals, without the employment of such an amount of force as would invalidate the observation. Moreover the mere act of injecting the drug is apt to quicken breathing, so that some minutes must be allowed to elapse for the animal to recover its equanimity before a trustworthy observation can be made. To obviate these difficulties we sometimes had recourse to anæsthetics. The cat was placed under its bell-jar with a sponge saturated with chloroform. In some five or ten minutes insensibility was produced, and the opportunity was taken of securing the animal on a Czermak's rabbit-holder. The influence of the chloroform being kept up continuously, the drug was injected hypodermically, and its effects noted at regular intervals. By this method we succeeded on one occasion in obtaining fifty-seven observations on the respiration in an experiment of one hour and ten minutes' duration. In other experiments we introduced the drug directly into the circulation through the medium of the jugular vein. In the case of a cat the injection of five minims of the undiluted extract by this method reduced the respiration in two minutes from 27 to 14, and in four minutes to 8, death ensuing about a minute later. It should be stated that no air was introduced with the drug, but it is probable that the spirit contained in the preparation played a not unimportant part in the production of the symptoms. In subsequent experiments on cats, the intravenous injection of even larger doses of the liquid extract diluted with saline solution to one in ten proved fatal far less rapidly.

The drug produces in guinea-pigs much the same symptoms as in cats. In one instance the animal's normal respiration was found, as the result of eight observations, to be from 60 to 64 in the minute. A hypodermic injection of fifteen minims of the liquid extract was then given, and three minutes later the respiration was 80 in the minute. Whether the primary quickening was due to the drug or to the excitement produced by its injection, we are unable to state positively. The respiratory movements fell in twenty minutes to 54, without the appearance of any sign of paralysis. The animal then began to quiver, and in a few minutes was unable to stand. In forty-five minutes from the injection of the drug the respiration was 30 in the minute, the animal at the time lying on its side and being at intervals slightly convulsed. At the expiration of an hour the breathing was 12, and a quarter of an hour later it was reduced to 6, soon after which the animal died. In all these experiments death appears to have resulted from asphyxia.

The following experiment clearly shows that if artificial respiration can be maintained until the drug is eliminated, recovery will take place. The animal was a white male mongrel poodle, weighing 5896 grammes. Its normal respiration was found, as the mean of twelve observations, to be 18 in the minute. The drug was injected under the skin of the back, the dose being forty minims of the liquid extract. During the first ten minutes the animal was very quiet, no material change in its condition being noticeable. In fourteen minutes it seemed drowsy and sleepy, the head and upper eyelids were drooping, and respiration had fallen to 9. A few minutes later the animal was placed on the floor, when it moved about readily, there being little if any loss of power in the limbs. Respiration was at this time 7, but was gradually quickened by the exercise to 13, and then to 17. The effects of the drug having obviously to some extent passed off, a second dose was given forty minutes after the first. This time a drachm of the liquid extract was injected, care being taken to ensure its absorption by introducing it in divided doses in several different places. In ten minutes the influence of the drug was very apparent. The breathing was again reduced to 13, and was very shallow and somewhat irregular. The impairment of motion was much greater, the animal staggering still more in its walk, falling or running against the wall or any object placed in its way. The last-named condition was undoubtedly in a great measure owing to some affection of sight. Occasionally the breathing was "cerebral," consisting of very superficial, alternating with deep and sighing, respirations. Ten minutes after this observation the animal suddenly became very restless, staggered, and, after taking a deep breath, fell over on its side powerfully convulsed. The convulsions continued with intermissions for about twenty minutes, during which time it was impossible to make any very reliable observations on the rate of respiration. Gradually the chest movements became more and more shallow, and finally the animal ceased to breathe, and was to all intents and purposes dead. As quickly as possible tracheotomy was performed, and a tube was introduced into the windpipe through which air was pumped into the lungs. During the operation the animal was perfectly motionless, but immediately on the establishment of artificial respiration it began to recover, distinct signs of vitality following almost the first expansion of the chest-walls. We cannot give positively the time which elapsed from the cessation of breathing to the opening of the trachea, but it was probably from two to three minutes. Artificial respiration was kept up for about ten minutes, and was then discontinued; after a pause natural respiration was established, though at first very slowly. The chest movements became gradually deeper and deeper, and in half an hour the improvement was so marked as to justify the removal of the tube and the closing of the tracheal aperture. In about a quarter of an hour the animal had a relapse, and the number of respirations was once more greatly reduced in frequency. The chest was pumped for some minutes, and fears were entertained that it would be necessary to again open the wound,

and keep up respiration by that means. The animal was seized with a series of regularly recurrent convulsive movements, but these gradually subsided, and an immediate improvement ensued. A quarter of an hour later the respiration was 17, and the animal was able to sit up, and soon after to walk about, though at first somewhat unsteadily. In about an hour from the relapse the respiration had become almost normal, and the animal was out of danger. In the course of the afternoon he had sufficiently recovered to make a hearty meal. The wound in the trachea quickly healed, and in a day or two the animal seemed none the worse for the dangers through which it had passed.

These observations show—1. That, in animals, gelseminum primarily affects respiration. 2. That it reduces the frequency of the respiratory act. 3. That the affection of respiration appears before the paralysis, and passes off earlier. 4. That gelseminum causes death by asphyxia. 5. That if artificial respiration be maintained until the drug can be eliminated, recovery will take place.

Such are the facts. What is their explanation? On what part of the respiratory system does the drug exert its influence? Dr. Burdon-Sanderson has kindly consented to make the experiments necessary for the solution of these problems, and will publish the results in the ensuing paper.

ACUTE ORCHITIS.

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AMONG the variety of remedies recommended by correspondents in THE LANCET for the relief of acute orchitis, one very valuable local application has been "conspicuous by its absence"—I mean the application of ice. Similar silence concerning ice has been observed by some of our most esteemed surgical authorities—Erichsen and Holmes in their text-books, and Humphry in his essay on the Testis in the "System of Surgery." For the introduction of ice, and the inculcation of its superiority over all other local applications to recent cases of acute orchitis, the profession is indebted to Mr. Curling; but as his "wisdom has been crying out" without many regarding it, I think it will be of advantage to not a few sufferers from the disease who can afford to rest at home or in hospital with an undivided testicle, if I quote his description. "The plan of proceeding is to keep the patient in bed, with the testicle well supported by a handkerchief, or, what is better, by a crutch-pad applied transversely beneath the testicles, the piece of bandage attached to each end of the pad being passed above the crest of the ilium and secured around the body. The ice is to be applied to the testicle by enclosing it in a small bladder or in an india-rubber bag with a somewhat narrow neck. This may be suspended from a cradle placed over the body, and the cold must be sedulously maintained by frequent renewal of the ice. The patient should be provided with two bladders or bags, one to take the place of the other as the ice melts. The effects of the application are remarkable. The scrotum becomes blanched, shrunk, and corrugated; the pain and heat are entirely removed, and in a few hours the enlargement of the gland is found much diminished."*

Since Mr. Curling's time, the application of ice to cases both of traumatic and gonorrhœal orchitis has become a matter of routine at the London Hospital, and the house-surgeon writes for it on the prescription board before the patient has come under the cognisance of the surgeon. Although the number of cases which have passed under my observation during the last ten or twelve years must have fallen very far short of the thousand submitted by Mr. Henry Smith to perforation of the testicle, I think I may venture to endorse the eulogium of ice which I have quoted from Mr. Curling's classical work. That which has recommended its application to me more than anything else is, that it has afforded relief to pain when ordinary warm fomentations and warm poppy fomentations have failed; and certainly if it should fall to my lot to be afflicted with an epididymitis, I should prefer sending to the fishmonger for ice to yielding the afflicted organ into the hands of a practitioner who proposed to practise an empirical paracentesis into its valuable secretory structure. In making this observation, I would by no means pretend to deny that benefit has followed from a procedure which has not received in all cases a rational explanation. The strong testimony borne by Mr. Henry Smith, Mr. Macnamara, Mr. McGill, and others should be sufficient to establish the fact that a considerable number of patients have experienced a decided relief from the local application of steel, but satisfactory proof seems at present to be wanting to show that such relief has not been due in all cases to bloodletting and to the evacuation of the fluid contained in the tunica vaginalis. The evidence given by Mr. McGill, who witnessed Mr. Smith's practice, and Mr. Spencer Watson, whose experience has been partly favourable to the operation, has been very definite on this point; whilst that of the advocates of the introduction of the narrow-bladed knife into the parenchyma of the testicle has been extremely vague. That it is not necessary to wound the parenchyma is shown by the practice at the Hôpital de Midi, where punctures were made in several places with a lancet, the instrument being carried, not into the body of the testicle, but simply through the tunica albuginea. Possibly Mr. Hutchinson could give us some additional information on this subject, as I learn from Mr. Bryant's "Surgery" that he has advocated the practice of puncture, and spoken highly of its value. In reference to the danger of protrusion of the tubules of the testis, Mr. Smith has recently stated that this protrusion has not taken place in his practice except in one instance, where a strumous young man received a severe blow on his testis the day after it was punctured; but in THE LANCET for August 6th, 1864, I find Mr. Smith describing apparently his first case of gonorrhœal orchitis treated by paracentesis, and telling us that "the tubes of the testicle shot out, as it were, from the wound, forming a protrusion the size of a nut." A little pressure was applied, and in two days the protrusion had disappeared. May not a similar result have taken place amongst those who, according to Mr. M'Gill, did not "return to risk a repetition of a treatment which they might possibly consider barbarous," and amongst the number of those, probably considerable, whom Mr. Royes Bell candidly admits that he never sees again? Until the treatment can be freed from the suspicion of damaging the parenchyma of the testis, it is scarcely likely to be generally adopted by surgeons who, by applying ice in the acute stage, and strapping when the severer symptoms have been relieved, can cure the affection in two or three weeks, and who fail to see by what process the introduction of a bistoury among the secreting tubules of a gland, which may be free from tenderness and inflammation, can benefit the swollen coils of its excretory canal, lying, as they do, altogether outside of the investing membrane which is thought, but by no means proved, to be in a state of tension. May we not hope that if a future series of cases be submitted to the operation we shall obtain a trustworthy explanation of its *modus operandi*, and, as Mr. Gay suggests, a strict definition of the class of cases and condition of the testis in which relief may be expected? My own impression is, that as the matter at present stands, the surgeon who punctures the testis *may* do well, but the surgeon who does not puncture the testis will do better.

Finsbury-square, E.C.

* Diseases of the Testis, Third Edition, p. 257.

DISEASES OF CATTLE.—An influential deputation waited on Tuesday last on the Lord President of the Council to urge upon the Government the necessity of uniform and compulsory general regulations in the United Kingdom for the suppression of cattle diseases. The Duke of Richmond and Gordon said that a measure was now before Parliament which was intended to remove some of the anomalies that exist in present legislation on the subject. It had been argued that all imported cattle ought to be slaughtered at the port of debarkation, but he thought this extreme measure was only necessary when disease was detected. All that the President could promise was to give the views of the deputation his serious consideration.

NOTES ON ASYLUMS FOR THE INSANE IN AMERICA.*

BY JOHN CHARLES BUCKNILL, M.D., F.R.S.

IN publishing Notes upon Asylums for the Insane in the United States, it will be expected that I should make some remarks upon the extraordinary state of medical opinion which permits and defends the use of mechanical restraint in institutions otherwise excellent. In doing so I shall endeavour to leave out of the count the condition of the insane in those institutions where political corruption or stupidity renders it impossible to apply a complex system of treatment which can only be efficacious under an enlightened and liberal management. The pages of THE LANCET are not likely to influence the politicians of New York, who think their insane sufficiently well cared for in the asylums I have described; neither will they have much weight with the gentlemen at Philadelphia who are in the habit of placing three violent lunatics to sleep (?) in the same cell, prudently enough protecting them in some degree by strait-waistcoats. But it is to be hoped that a fair and frank challenge to the medical superintendents of the State asylums and the hospitals for the insane will be accepted in the friendly spirit in which it is given, and that they will not refuse to show reasons why they adhere to a mode of treatment which in this country is condemned by the almost unanimous voice of the profession and of the public.

A considerable proportion of poor lunatics in nearly all the States are still detained in the county almshouses, and even in the gaols. In Missouri Dr. Compton states that "a stream of acute and violent cases passes from the gaols to the asylum," as room is made for them in the latter by the discharge of chronic cases to the care of their friends; and the medical superintendents at the Auburn meeting last year passed a series of resolutions on the detention of lunatics in almshouses, of which the following words are the preamble:—"The condition of the insane in the county almshouses in the different counties of this Commonwealth is such as to excite our most profound sympathy, and to arouse in us a determined effort for their comfort and relief." And we learn incidentally from a statement made in the *Boston Medical and Surgical Journal* for November last that the insane inmates of the almshouse in the vicinity of Chicago are still habitually secured by chains.

The insufficiency of asylum accommodation, especially in the southern and western States, is no doubt at the present moment rather a social and financial than a medical question. Death and the increase of population have outrun the development of the resources of the country, and the incidence of taxation, general and local, is extremely oppressive. With the continuance of peace and the return of prosperity the provision of suitable and sufficient accommodation for the care and treatment of all the insane will become an imperative duty with the instructed and humane Americans; but there can be no doubt that medical opinion will be able greatly to expedite and complete this great and good work, if it is founded upon reasons and facts which will obtain the approval, and command the sympathy, of that public opinion which is the ultimate and supreme power in the Republic. Nothing is so likely to bring speedy "comfort and relief" to the insane confined in county almshouses as a full recognition of the wide contrast between their miserable condition and what might be their comparative happiness in well-ordered asylums; and the best direction of the "determined effort" promised by the medical superintendents will certainly be towards the realisation of this contrast in the knowledge and opinion of the general public.

But, unless I am much mistaken, the superintendents of asylums in America have a heavy task before them, which will indeed require a determined effort before they can say that they possess the confidence of the public in the same degree to which of late years it has been extended in England to the management of our county asylums and hospitals for the insane. With us, the management of our asylums is open and patent. Abuses occur, as they will occur everywhere; but they are remedied, and if need be punished, in the most public manner, and the records of them are displayed to the eyes of the world. It is thus that the American journals, in replying to THE LANCET's leading article on the American Asylums, have been able to cite so many instances of disaster in our asylum work. But where shall we look for any record of wrong-doing or misfortune which, in the nature of things, must take place in American asylums also? So far as I know, it does not exist. There is in America no central authority to prosecute and punish such wrong, and no public record of circumstances to lament and avoid.

Putting altogether out of consideration opinions and sentiments which were expressed to me privately, few things struck me more forcibly in America than the painful sensibility to public opinion which was manifested both at the conclave of medical superintendents which I had the great pleasure to attend, and in the published transactions of that held last year. I think I may truly say that nothing of the kind exists with us, and few things would surprise me more than to hear a debate at one of the annual meetings of the Medico-Psychological Association upon the necessity of preventing or curtailing the transmission of the letters of patients in asylums either to their friends or to public authorities, or a discussion in which it was maintained that the absence on leave or the discharge of uncured patients was undesirable on account of the accusations and complaints which such persons were liable to make about their treatment; and as a final instance of this difference of feeling I may mention that THE LANCET Commission, which will be generally welcome to English asylums in proportion to its ability and thorough faithfulness, has been deprecated in the *American Journal of Insanity* as "an insult to the Commissioners in Lunacy, and the medical staff of every English hospital."

Pondering these things, and many others with which I should not be justified in occupying space, I have been able to come to no other conclusion than that the great stumbling-block of the American superintendents is their most unfortunate and unhappy resistance to the abolition of mechanical restraint. I was told everywhere, except at Utica, that this question was settled in America, and that it would be useless and futile to reopen it. I was informed that, after many minor discussions, a great and final discussion of the whole question had taken place in 1874 at Nashville, and that the superintendents had there unanimously decided that the abolition of mechanical restraint was utterly impracticable; and that the statements of the English on the subject were not to be relied upon. I was again and again informed that the system of non-restraint had proved quite a failure in England, and that we were rapidly returning to the old practices. As such statements were not very agreeable to me, and especially as I found that my contradiction could be met by the published opinions of some two or three English superintendents who, although no prophets in their own country, are eagerly quoted abroad, I resorted to the somewhat vulgar expedient of offering a bet as an expression, or, if you will, a *meter*, of my belief. Faraday tells us (Lecture on Mental Education), that Dr. Wollaston once did the same thing to him, on which "I rather impertinently quoted Butler's well-known lines about the kind of persons who use wagers for argument, and he gently explained to me that he considered such a wager not as a thoughtless thing, but as an expression of the amount of belief in the mind of the person offering it."

With such an illustrious example, I may be permitted to think that my offer of a wager also was not "a thoughtless thing," and it certainly was not considered a rash one, for although I repeated it both privately and before many superintendents at Auburn, it was not accepted, and it certainly stopped the talk about our relapse. My offer was a wager of one hundred pounds that any American superintendent should go to England and should have free access to all public asylums there, and that in a search of one month he would not be able to find one patient therein in any form of mechanical restraint.

I have before me a full report of the great discussion above referred to, but the subject is so threadbare in the pages of THE LANCET, wherein the great battle was fought in ancient times, that I shall only venture upon a few brief extracts and remarks. The termination, however, of the

* Although this is the concluding paper of Dr. Bucknill's series of articles on American Asylums, we have elected to publish it first.—ED. L.

discussion is so astounding and instructive, that I really must entreat THE LANCET to find space for it.

"Dr. Walker, of the Boston Asylum, vice-president of the Association, acting as president in the absence of Dr. Nichols, said: I was gratified when visiting the institutions in England—the few I did visit—to find that almost universally (certainly in four-fifths of the cases) the superintendents expressed themselves in favour of mechanical restraint, and, singularly enough, the superintendents lay the blame of non-restraint upon the Commissioners in Lunacy, and the Commissioners in Lunacy throw it back upon the superintendents. They say the superintendents are emulous one of another to report the smallest number of restraints during the year. Certainly in my presence and that of an American medical friend accompanying me, almost without exception they expressed their preference for mechanical restraint, and hoped they would have it established there. From an experience of over twenty years, and from a careful and, I hope, by no means superficial study of this question, I firmly believe that in the future the practice of our best American asylums now *will become the governing rule of Christendom.* — Dr. Rodman: Did you visit Conolly's asylum? — The President: I did. — Dr. Rodman: What is the practice now? — The President: That was the only hospital that I visited where I found any difference at all as to mechanical restraint. There they were using, so far as I observed, the attendants' hands and the closed room. — Dr. Rodman: If the change begins there, and ends there, it certainly must be apparent to every member of this Association that the days of non-restraint have died out.—The President: They told me that the adoption of non-restraint was not due to Dr. Conolly at all, but through the superintendent of the female department, a modest and retiring man, who attempted to abolish mechanical restraint, and succeeded. Seeing the result in his hands, Dr. Conolly adopted it and became its champion and high priest.— Dr. Rodman: Dr. Conolly has the credit as the apostle of non-restraint.—The President: Not only the apostle of non-restraint, but the apostle of humanity too."

I must resist the strong temptation to treat the above in the manner it invites, yet how to treat it seriously I scarcely know. Yet it is a most serious matter, and reveals the true foundation of the American prejudice—namely, profound ignorance of what has really been done, and is yet doing, in this country.

Among all the medical men connected with asylums and the treatment of insanity whom I met with in the States, amounting to nearly a hundred, I only met with two who mentioned to me that they had visited our asylums, and had really studied our system, and both of them were ardent admirers of it. The first of these was Dr. Edward Jarvis, the well-recognised head of his profession, but, alas, now a head enfeebled by age and infirmity. This most able man urged me to travel the States on a mission of reform, which, unfortunately, my own health rendered me quite incapable of doing. The other person was the senior assistant-physician to the McLean Hospital for the Insane, whose name I forget, but who, while earnestly studying the treatment of the insane in England, lost his promotion in America. He also had become a thorough convert to our opinions and practice, which I truly hope will not prejudice him in the eyes of his professional brethren.

And here I may very fairly ask why the leaders of medical opinion in America do not come to this country, and really study this most important question fully and conscientiously? The result would not be doubtful. The leading men of mental medicine in France and Germany did so, and were convinced. The illustrious Griesinger has told us in noble words how his adverse opinions were changed to joyful astonishment by personal observation of the working of the non-restraint system from one end of England to the other, and that objections to the system proceed entirely from those who have not either practised it or seen it in practice.* Westphal, the eminent successor of this greatest of modern alienists, perhaps never stood in the position to be converted; no more staunch upholder of the system, however, exists. Morel, of Rouen, also one of the very ablest of the Frenchmen in our specialty, was an enthusiastic convert, and the Americans will do well to peruse his book on the subject, and to compare the faithful observations and earnest thought of a great mind with the above facile remarks of their President, with which they can scarcely be satisfied.

(To be continued.)

* Pathologie und Therapie, pp. 506-9; Zweite Auflage.

ON

OBLIQUE FRACTURE OF THE HEAD OF THE HUMERUS.

BY ALEXANDER OGSTON, M.D.,
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OBLIQUE fractures of the upper end of the humerus, with the obliquity approaching much nearer to the longitudinal than to the transverse direction, are either very rare or have been for the most part overlooked.

In the article by M. Benjamin Anger in the "Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques" (1866, art. *Bras*), which may fairly be taken as a good *résumé* of French surgical knowledge on this point, no mention is made of these injuries in treating of fractures of the upper end of the humerus. Von Pitha, when discussing the same subject in Pitha and Billroth's "Handbuch der Allgemeinen und Speciellen Chirurgie," a work which occupies a similar position in German literature, is equally silent regarding this injury. And Nélaton, in his "Pathologie Chirurgicale" (1869, tome ii.), makes no mention of their occurrence.

In Britain, Sir Astley Cooper ("Fractures and Dislocations," 1826) does not seem to have met with any examples, and the only authors who describe them, so far as I have been able to discover, are Mr. G. J. Guthrie and Dr. R. W. Smith of Dublin. The former of these, in a clinical lecture delivered at Westminster Hospital on November 9th, 1833, "On a Peculiar Injury of the Shoulder-joint," and which was published in the *London Medical and Surgical Journal* of Nov. 16th, 1833, narrates five cases in which he arrived at the diagnosis of oblique fracture of the head of the humerus. The fracture, he believed, extended in the direction of the bicipital groove, separating the greater tuberosity and the whole or greater part of the head, which formed the upper fragment, from the smaller tuberosity with more or less of the head, which, remaining in continuity with the shaft, formed the lower fragment. Two of his cases—that of a drayman aged about forty, who met with his accident by falling on the right shoulder, and of a boy—are meagre sketches from memory, containing no more details than those mentioned, save that both recovered with useful shoulder-joints, and that the drayman presented the deformity described in his other cases presently to be adduced, the deformity remaining after his recovery. The other three cases are—

1. Louisa C——, aged eleven, fell on the shoulder (side not stated) on October 8th, 1833, and was admitted to Westminster Hospital under the care of Mr. Lynn. There was found a considerable prominence inside the anterior part of the shoulder, beneath the coracoid and acromion processes, and in the situation of the small tuberosity of the humerus; this was visible from a distance, and might have been taken for a dislocation save for its feeling rough and irregular, unlike the head, and that the greater part of the head could be felt in the glenoid cavity. Rotation at the elbow was distinctly communicated to it. *Rotation is said also to have been communicated to the part lying in the normal situation of the head* (?) The arm could be elevated and the hand placed on the vertex of the head (whether actively or passively is not stated). The elbow was directed a little backwards, but could easily be brought close to the side. There existed a hollow below the acromion and greater width of the injured shoulder. The arm was half an inch shortened when measured from acromion to olecranon.

2. Colonel Y——, aged thirty-five, was thrown from his horse on his left shoulder. Two hours after the accident the shoulder was found swollen, with symptoms similar to those of Eliza C——, but with a little more protuberance inside the shoulder, and occasional crepitus on rotating the elbow. Deplech, of Montpellier, who saw the case with Mr. Guthrie, considered it a fracture of the nature mentioned

above. Colonel Y—— recovered with a useful arm, but the prominence remained to a certain degree.

3. Mr. P——, jun., aged eighteen, fell on the point of his shoulder (side not mentioned), and was supposed to have dislocated the head of his humerus. The supposed dislocation was twice reduced, but failed to remain in position. Three weeks after the injury he was seen by Mr. Guthrie. The elbow was carried very far backwards and the head of the humerus forwards; the prominent head did not feel like the normal head, but seemed as if it had been split. After bleeding and tartar emetic, reduction by pulleys twice failed, and after this the position was somewhat improved. The outer part of the head seemed in the glenoid cavity, but the inner and greater part was internal to it. The elbow was in proper position, and the arm could be pressed against the ribs. He recovered with a useful arm.

Fourteen years later Dr. R. W. Smith, of Dublin, in his work "Fractures in the vicinity of Joints," (1847, p. 176) directed attention to similar injuries, but differed from Guthrie as to their explanation. He called them fractures of the greater tuberosity, and stated the following appearances as being characteristic of them. They resemble dislocations in the prominence of the acromion, in the altered contour of the shoulder, impaired motion, separation of the arm from the side, and occasional absence of crepitus; but differ from them in the increased breadth of the articulation, which is sometimes twice the natural breadth, and in the projection of the acromion being less than in luxation. The rounded form of the shoulder is altered and the deltoid somewhat flattened, but the finger cannot be sunk into the glenoid cavity; the arm can be without difficulty approximated to the side; the "under" motions of the limb can be performed, but the patient cannot raise it beyond the horizontal line, and seldom even so far; and he supports the injured arm with the opposite hand. The articulation presents two osseous tumours, the one externally beneath the acromion, and the other, the larger, beneath and a little internal to the coracoid process. The latter feels like the rounded head of the bone, moves with the arm, and exhibits a sulcus of varying depth and distinctness between it and the other fragment in the situation of the bicipital groove. Dr. Smith brings forward three cases, one of them, quoted as having been communicated to the editor of Sir Astley Cooper's work on Dislocations by Mr. Herbert Mayo, having no resemblance to Guthrie's cases, and, as it was in all probability (the details are most meagre) a fracture of the greater tuberosity alone, it does not concern the injury in hand. The other two cases are original observations.

The first (4) was discovered at the post-mortem of Julia D——, aged eighty. The left shoulder had, to a certain extent, lost its rounded form. The acromion was prominent, but less so than in dislocation. The breadth of the articulation was greatly increased; and, on pressure beneath the acromion, an osseous tumour, not like the head of the humerus, but moving with the arm (the injury was ancient), could be felt in the glenoid cavity through the soft parts. A second and larger tumour, presenting the rounded form of the head of the humerus, lay beneath the level of, and internal to, the coracoid process; and between the two the finger could be sunk into a deep sulcus, placed immediately below the coracoid process. The elbow could be brought into contact with the side, and there was no appreciable alteration in the length of the arm. On dissection, the head of the humerus lay beneath and partly internal to the coracoid process. The greater tuberosity, with a small portion of the outer part of the head, had been completely separated from the shaft. This portion occupied the glenoid cavity, and was contained within the capsular ligament. The fracture traversed the upper part of the bicipital groove. A new and shallow socket had been formed on the costal surface of the neck of the scapula below the root of the coracoid process, and the inner edge of the glenoid cavity corresponded with the posterior part of the sulcus which separated the head of the bone from the detached tuberosity. The latter was united to the shaft only by ligament. The articular capsule had not been injured, but was enlarged, thickened, and partly ossified. No history could be obtained. In the woodcut illustrating this case Dr. Smith has depicted the biceps tendon as lying in the sulcus formed by the fracture.

The other case (5) was that of a man, aged thirty, who fell from a house three storeys high, and received a severe injury of the left shoulder-joint. When taken to Richmond Hospital, the head of the humerus was placed more forwards than natural, the acromion more prominent, the deltoid somewhat flattened, and the elbow separated from the side. Reduction, by the knee in the axilla, of the supposed dislocation was had recourse to, the deformity apparently removed, and the arm bandaged to the side. In a short time the bandages were removed for severe pain, and the deformity was seen to have returned. On examination, crepitus was detected. Next day he was seen by Dr. Smith, in consultation with Mr. Adams. The limb presented appearances similar to those in the preceding case. The acromion was prominent, but the finger could not be sunk into the glenoid cavity. There was no difficulty in approximating the arm to the side; the breadth of the joint was nearly double that of the opposite one; and two tumours were distinctly noticed, the inner and larger of which, placed under the coracoid process, was evidently constituted by the head of the humerus, while the external and smaller, apparently formed by the greater tuberosity, corresponded in situation to the glenoid cavity; they were separated by a deep and well-marked sulcus, which followed the direction of the bicipital groove. The deformity could not be completely removed by any means whatever.

These two cases of Dr. Smith's are evidently what he claimed them to be—fracture of the greater tuberosity *with more or less of the adjoining portion of the head of the bone*; in other words, obliquely longitudinal fracture of the head of the humerus, the fracture extending in the direction of the bicipital groove *and the greater part of the head remaining attached to the lesser tuberosity*. Messrs. Flower and Hulke (Holmes's "System of Surgery," 1870, vol. ii., p. 782) refer Dr. Smith's cases to the category of dislocations complicated with fracture of the great tuberosity; but there seems every reason to regard this opinion as erroneous, and to agree in the view taken of them by Dr. Smith himself. They plainly have not the least analogy with the tearing off of the bone at the points of muscular insertion into the great tuberosity—so common a complication of dislocations of the shoulder-joint. Dr. Smith claims Guthrie's cases as being of the same nature as his own, and certainly one of them (No. 3 of the present paper) seems exactly similar, the greater part of the head of the humerus having been felt in connexion with the lesser tuberosity. But Guthrie's other two cases (Nos. 1 and 2 of the present paper) deserve to be looked upon in the light in which he himself regarded them—as oblique fractures where *the whole or the greater part of the head remained attached to the great tuberosity*; for it is expressly mentioned that the projection in the situation of the lesser tuberosity felt rough, irregular, and unlike the head, and that the greater part of the head could be felt in the glenoid cavity. *(To be concluded.)*

THE FORMATION OF LAMINATED CLOT.

BY RALPH W. LEFTWICH, M.D., C.M., M.R.C.S.

THE views which have hitherto been advanced respecting the formation of this variety of clot are, briefly, that it is—(1) a malignant growth; (2) the result of an inflammation of the sac with successive effusions of lymph; (3) a subsequent stratification of passive clot; (4) due to alternate agitation and comparative stagnation of the blood in the sac (Broca). Of these, the first is, of course, quite obsolete; the second and third are incompatible with the fact that the outer laminæ are older than the inner; and the fourth fails to explain its occurrence in situations where the blood is always still. The view now brought forward is at least open to none of these objections.

The deposition of the first layer in an aneurism presents no difficulties; since it is admitted that the expanded, thickened, and perhaps detached wall of the artery sufficiently resembles a foreign body to account for this. The deposit, however, must be of limited thickness, for the soft coat of fresh clot will soon hide the roughness and present to the blood a surface as smooth as that of the lining mem-

brane of a healthy artery. Thus, as soon as this point is reached, the process is interrupted. What happens now is not very mysterious: it is simply that this thin layer of clot follows its natural tendency and *contracts;* and that, in the contracted state, it once more presents a rough surface ready for the deposition of a fresh layer.

It is necessary here to examine more carefully the way in which it contracts. Contraction of the lamina may take place in two principal directions—that of its long, and that of its short axis; by "long axis" must be understood the direction of its length or breadth; by "short axis," the direction of its thickness. The former alone can reduce the size of the cavity, the latter will slightly enlarge it. Now contraction in the long axis is prevented from occurring at present by the pressure of the blood; the roughened surface is due, therefore, to contraction in the direction of its thickness alone.

The other layers are deposited in the same way, each in its turn contracting so as to form the roughened surface ready for the reception of the next. Thus a definite interval of time occurs after each deposit, and the record of this interval is found in the stratum of leucocytes which occupies the inner aspect of each lamina; for during the process of contraction, these corpuscles, in hugging the sides, have either become entangled in the clot or have partially migrated into it.

It may be questioned whether the contraction of a layer can make its surface sufficiently uneven for fibrin to be deposited upon it. Indeed, it is evident that in some cases it is inadequate, otherwise all aneurisms would be cured. One other condition, therefore, is necessary—viz., a moderate degree of rest. That, when conjoined with rest, it suffices, has been proved by Durante (quoted in Brücke's Vorl. ü. Physiologie), who showed that even microscopic degrees of roughness were sufficient to produce deposition of blood-clot.

Laminated fibrin has been found in many other situations, but the explanation given of its production in aneurisms may readily be applied to it elsewhere. It will be well, however, to consider some of these in detail.

The conical clot in a ligatured artery is composed of this substance. When an artery is deligated, the blood first clots upon the shrivelled retracted end, and forms a layer of limited thickness. This then contracts, and admits of the reception of a second. Others follow, until the first branch is reached, when, the important auxiliary condition, rest, being no longer present, further increase is prevented. The conical shape is thus explained. There is here no obstacle to contraction in the long axis. The first layer, therefore, contracts in both directions; then the second layer is deposited; but this occupies, when fresh, the same extent of surface as its predecessor when contracted; so that, after its own contraction, its superficies is smaller. Each layer, therefore, being smaller than the one before, the shape of the whole mass is necessarily conical. It is not easy to account for the presence of the canal which is sometimes found in the centre of the internal clot, unless it be assumed that, in these cases, the artery was diseased, and that the rough surface of the tunica intima was the seat of the first lamina: the process being continued in the way described below as true of certain blood-cysts. The increase in the size of an embolus after its impaction occurs in precisely the same manner as that described for conical clots, except that if the blood have access to it on both sides it will grow in both directions.

This form of fibrin is frequently found upon the valves of the diseased heart, and is here a fruitful source of systemic emboli. The size it attains is necessarily limited, on account of the motion of the blood (there being no real analogy between this and "whipping"); but while in a healthy heart rest would probably be entirely absent, yet in a diseased condition, and especially in stenosis, it would be doubtless present in some degree.

The occurrence in certain blood-cysts of serum in the interior of the clot can be readily explained without having recourse to such a chemically improbable idea as the breaking down of the centre of the clot—i.e., the conversion of fibrin into serum. It is well-known that blood effused will remain fluid for a long time. When therefore the blood-cyst is first formed a thin layer is deposited upon the walls of the cavity. This then contracts, chiefly in its short axis, and other layers are superposed in turn. But, since the first laminæ effectually prevent the further effusion of blood, there comes a time when all the fibrin contained in the cyst is exhausted, and the broken-down corpuscles being in great measure included in the clots, nothing remains but some blood-stained serum. Laminated fibrin has been found in hæmatoceles. In such cases, the formation of the first layer may have been due to the fibrino-genetic action of the fluid secreted by the tunica vaginalis.

In the beginning of this paper it was shown that the obstacle to contraction in the long axis of the laminæ is the pressure of the blood. Now, when an aneurism is treated surgically, this is almost completely abolished. The thickened sac of the aneurism, formed as it is of new fibrous tissue, is in a condition precisely analogous to that of the lamina. The whole contracts therefore as one mass, and the cavity is lessened or obliterated. The important part played in the cure of aneurism by the contraction of the sac has long been recognised, but, if this view be correct, it is even more important than has been supposed. That very little clot is necessary for the cure of an aneurism is shown by a case of Mr. Maunder's, where, five months after ligature, the diseased artery was found of the same calibre throughout, and the seat of aneurism could not be detected. ("Surgery of the Arteries," p. 66.)

Mr. Holmes argues, from the occasional rapid cure of aneurism (e.g., by digital pressure), that there is not time for the formation of laminated clot, and that consequently in some cases passive clot must subsequently become stratified. With great respect for the opinion of one who is so great an authority upon aneurism, it is submitted that the large amount of contractile force thus suddenly brought into use may suffice to explain it.

It is interesting to observe in some specimens how this contractile force of the clot, increasing with each additional layer, becomes at length sufficient to counterbalance the blood pressure, and how this pressure is then exerted successfully upon the unprotected surface of the distal side of the sac. Many cases of aortic aneurism involve the innominate artery in this way. In the distal operation for aneurism the occasionally successful result is due probably to the fact that the blood, following the course of least resistance, exerts less pressure than formerly upon the dilatation. This would be especially true in those cases where, owing to the position of the vessel, the sac remains full during the diastole. It is suggested that, in certain cases of internal aneurism, all the benefit of the distal operation in its most favourable conditions may be obtained by placing the patient in such a position that the orifice of the sac be uppermost. The blood would thus be at rest, and its active pressure would not be directed against the walls of the cavity. The situation of the orifice may generally be easily determined by auscultation; for if the sac remain full during the diastole, the bruit will either have disappeared or have been considerably diminished.

The principle of all treatment therefore must be to diminish blood-pressure. This may be accomplished by rest in the horizontal position, low diet, and removal from all sources of excitement, and by venesection. Local means are ligature or compression of arteries, special decubitus, and even galvano-puncture, or other methods for the production of passive clot in the sac. Of drugs, those which lower blood-pressure would be indicated; but since the action of these is rarely uncomplicated, care should be used in their administration.

HYOSCYAMIN IN CHOREA.—Dr. Oulmont has been very successful in five cases of chorea, treated by him with hyoscyamin in his wards of the Hôtel Dieu. In one case the patient was two months pregnant. Various drugs had failed, and notably bromide of potassium in doses of three drachms daily. Hyoscyamin was given in gradually increasing doses of from two to eight milligrammes daily. Amelioration was soon evident, and the case speedily got well.

EARLSWOOD IDIOT ASYLUM.—The twenty-ninth anniversary festival of this excellent institution was held on Wednesday, at the London Tavern. The chair was occupied by the Earl of Shaftesbury, and a numerous and distinguished company were drawn together on the occasion. During the evening the secretary announced the receipt of subscriptions amounting to upwards of £2400.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SCARLATINAL DROPSY; CONVULSIONS; VENESECTION; RECOVERY.

(Under the care of Dr. WILKS.)

FOR the notes of the following interesting case we are indebted to Mr. John Rendall, house-physician, who conducted the treatment of the case.

F. M——, a girl aged seven, was admitted on Jan. 21st with general dropsy. Her father had dropsy when fourteen years of age, but the mother had always been healthy. There was no history of rheumatism in the parents or in the patient, but it had been noticed that from birth the girl was cyanotic, especially after any physical exertion. Four years ago she had measles, and she had always been a delicate child.

On Dec. 28th, 1875, she was attacked with scarlet fever, and on Jan. 22nd she left her bedroom for the first time, and on the evening of the same day her eyelids swelled. After this the dropsy gradually extended over the whole body, in which condition she was admitted.

On admission the countenance was swollen, pale, pasty, and œdematous, and the lips were blue; the legs, arms, and abdomen were also swollen; the fingers were bloodless, the tips blue; there was distinct fluctuation and gravitation of fluid in the abdomen; the tongue was covered with a white fur; there was no evidence of desquamation except a slight scaling between the thumb and forefinger of the left hand. Loud rhonchi, sibilant and moist sounds, were heard all over the chest, both anteriorly and posteriorly. The precordial dulness could not be distinctly made out, but there was dulness extending from the second rib downwards a little to the right of the median line, and also to a line drawn from the apex of the axilla downwards. A thrill was felt in the left second interspace, and a loud systolic murmur was heard in the second left intercostal space, as well as in the axilla and at the back, but loudest just over the pulmonary valves, running along the pulmonary artery up to the axilla. Urine: specific gravity 1018; half albumen; no blood; hyaline and epithelial casts. Ordered ten grains of compound jalap powder at once, and half an ounce of the acetate of ammonia mixture every six hours.

At 8.30 P.M. the patient was seized with convulsions, most marked on the right side of the body, while the head and eyes were inclined to the right side. The spasms were mostly of a clonic nature, and there was rigidity of the muscles of the neck. There was foaming at the mouth, but the tongue was not bitten, although the teeth chattered, and there were convulsive movements of the muscles of the face. The pupils were slightly dilated, the conjunctivæ almost insensible, the breathing loud, almost stertorous, and the face livid. These fits were frequently repeated, and during the intervals the patient was quite unconscious. A warm bath was administered, with no good result. As the convulsions continued, and increased in intensity, venesection from the median cephalic vein to three ounces was practised whilst the patient was in the bath, but there was no cessation of the convulsions. Temperature 102°; pulse 90.

Chloroform was administered, and the convulsions ceased, and the patient was quiet till ten o'clock next morning (Jan. 28th), when the fits occurred a second time. Venesection to five ounces was done, with great relief, the convulsions ceasing in ten minutes, and not occurring again, the patient making a gradual recovery. During the fits the breathing was suspended for some seconds, after which it resumed its former character.

Jan. 30th.—Patient sensible. Pulse 70; less dropsy about abdomen; lower eyelids still œdematous; urine, albuminous one-third; specific gravity 1020.

Feb. 6th.—Urine: slight cloud of albumen; no casts. Patient is rapidly improving, and all the dropsy has disappeared. Bruit still the same.

12th.—No albumen in urine.

18th.—Got up for the first time.

26th.—Left the hospital cured.

SEAMEN'S HOSPITAL, GREENWICH.

FRACTURE OF THE NECK OF THE FEMUR IN ATTEMPTED REDUCTION OF AN OLD DORSAL DISLOCATION.

(Under the care of Mr. JOHNSON SMITH.)

NICHOLAS B——, aged thirty-six, was admitted on Oct. 19th, 1875, with considerable distortion of the right lower limb. On May 4th the patient fell into the hold of a ship at Malta, and dislocated his right hip. He was at once taken to a hospital, where he remained until Oct. 7th. During his stay there three attempts were made to reduce the dislocation, but without any successful result.

When admitted into this hospital, twenty-four weeks after the accident, the patient was lame and helpless, and could not get about except on crutches. The right lower limb was shortened to the extent of two inches and a half, the foot was much inverted, the great trochanter very prominent, the hip joint very stiff, and the muscles of the whole limb weak and much wasted.

On Oct. 23rd, the patient having been placed under the influence of ether, an attempt was made to move the head of the bone by manipulation. During the movement of forcible adduction, after some fibrous adhesions had been ruptured, a loud crack was heard, and the whole limb, from the great trochanter downwards, became much more movable, and could be restored at once to its normal position of extension, and almost to the length of the opposite limb. The patient was put to bed with the right limb placed between sandbags.

In the evening there was much pain about the hip and some swelling in the upper third of the thigh, which swelling in the course of the two following days increased to an enormous extent. The superjacent skin was slightly ecchymosed, and the tumour was soft and fluctuating, but did not pulsate. The pulsations of the posterior tibial artery could be felt during this period, and the surface of the right foot, though rather blue, still remained warm. There was severe constitutional reaction, and frequent vomiting. Ice was kept constantly applied over the swelling, and the limb retained at perfect rest between sandbags. On the third day the swelling commenced to diminish, and was harder. At the end of the next day it had almost quite disappeared, but there was still much tenderness in the region of the hip. On Nov. 5th the limb was extended by weights, gradually increased during the next month from six to fourteen pounds, the patient for most of this time being in good health, and free from pain at the seat of the old injury.

On Dec. 7th the extension of the limb by weight was discontinued. The right limb was now almost as long as its fellow; the foot was in a good position, and could be inverted or everted by the patient to a considerable extent. The patient could raise the whole limb, the movements at the hip-joint being free, but those at the knee were not quite so free, probably in consequence of the prolonged rest and extension of the limb.

The man was able to get up on Dec. 11th, and to move about on crutches. On Jan. 1st, 1876, he was able to walk with the support of an ordinary walking-stick. There was no distortion of the right limb, but shortening to the extent of one inch. The knee-joint was still stiff.

On Jan. 27th the patient was discharged. He was able to walk well, though not for any great distance, in consequence of stiffness in the right knee, and some pain after exercise in the hip. Limb still in good position, and showing no tendency to any further shortening.

LEICESTER INFIRMARY.

RECORD OF CASES OF STONE IN THE BLADDER TREATED BY THE MEDIAN OPERATION OF LITHOTOMY.

THE median operation having been almost entirely discarded by most of the London surgeons, it will be, doubtless, interesting to the profession to have a brief analysis

presented to them of the stone cases lately operated on at the Leicester Infirmary, where a long experience and a full and most patient trial of both the median and lateral operations have led to the adoption of the former in every case. The following analysis has been confined to the last two years, not on account of any greater success that has attended the operations during this period than formerly, but owing to the unfortunate absence of any detailed records previous to these two years.

For the following notes we are indebted to Mr. Joseph Hunt.

During the years 1874 and 1875, twenty cases of stone have been operated on at the infirmary, and in all the median operation was employed.

Table of Twenty Cases of Stone at the Leicester Infirmary, 1874–1875.

No.	Age.	Number of days under care.	Weight of stone.	Result.	No. of days after operation on which water came by urethra first time.
1	2½	37	150 gr.	cured	1st.
2	2½	29	80	„	same day
3	3	19	20?	„	1st
4	4	33	135	„	5th
5	5	38	65	„	4th
6	6	33	102	„	1st
7	7	33	120	„	5th
8	9	?	135?	„	?
9	10	15	135	„	3rd
10	10	44	370	„	11th
11	10	93	79	„	?
12	11	47	380	„	2nd
13	11	29	212	„	8th
14	40	47	750	„	?
15	50	33	436	„	16th
16	60	23	232	„	10th
17	61	?	?	„	?
18	62	7	?	death	?
19	63	33	325	cured	?
20	70	54	495	„	2nd

From the above table it will be seen that out of 20 cases one only had a fatal termination, and in this instance death resulted from pyæmia. The percentage of mortality is thus as low as 5 per cent., or 1 in 20. The average age of the patients operated on was 24·85, and in the 14 cases in which the first escape of urine per urethram is recorded, it took place on the average on the fifth day. No fair inference as to comparative rapidity of recovery can be drawn from the length of time a patient remains in the hospital after operation; since in Leicester the patients, as a rule, are not discharged at so early a period as they would be under the same circumstances in London, and in Leicester are often kept in the infirmary for some time after the wound is completely healed up. Nevertheless, of 18 recorded cases the average number of days was thirty-six, dating from operation to discharge. As regards the cases operated on at Leicester, it may be remarked that there was a very slight amount of hæmorrhage, which in most cases was confined to general oozing, and which readily stopped when the legs were bound together. Still in one case, to be hereafter noticed, very severe secondary hæmorrhage occurred.

That the opening for the extraction of the stone is not so large as in the lateral operation is undoubtedly true; but, on the other hand, it must be remembered that, owing to the perfection which this branch of surgery has attained, very large stones (and these are the only ones not so well suited for the median operation) are becoming comparatively rare, and where they have been met with no serious results have followed the introduction of a lithotrite or crushing forceps through the wound into the bladder, in order to break up the stone.

With regard to the amount of tissues cut through in the median operation, and the disputed dilatability of the prostate, fortunately for the patient, but unfortunately for the argument, practical experience in these cases teaches nothing, the almost uniform success met with in the exercise of this operation at Leicester precluding the making of any post-mortem examination, and under the circumstances it may be well to leave facts to speak for themselves, and abandon all theorising in the matter. One fact, however, is certain, that if the prostate be not dilatable, it can usually be torn with the most favourable result, and without any great addition of danger. Still, on the other hand, any *great* division of its substance is liable to be followed by serious secondary hæmorrhage, as occurred in a case referred to above, and to be again noticed (No. 14).

CASE 14.—For many years the patient had felt pain in the lower part of the abdomen, and also during micturition. During the last few months he noticed blood in his urine, and an increase of pain, which was relieved on standing up. Admitted April 13th, 1874.

April 22nd.—Patient was anæsthetised, and the median operation performed in the usual way, the stone being very large (twenty-two drachms). The prostate was afterwards freely incised on each side, and a crushing instrument being introduced into the bladder, the stone was broken up, and then extracted. On the patient being removed to bed, free hæmorrhage took place, which was stopped by a tube and plug. Temperature 98°; pulse feeble.

24th.—Tube and plug removed. Patient progressing well.

31st.—10.30 P.M.: Secondary hæmorrhage, patient losing over a pint of blood; this ceased on the wound being plugged again and the application of ice.

May 4th.—Plug removed and replaced.

7th.—11 A.M.: Recurrent hæmorrhage, by which patient lost a pint of blood. Digital pressure was resorted to for a quarter of an hour, and the wound afterwards mopped out with perchloride of iron. Plugging not resorted to.

June 8th.—Patient had no further return of the hæmorrhage, and gradually regained his strength, though the wound never completely healed, and patient was discharged to-day with a urinary fistula communicating with the rectum a quarter of an inch inside the anus. This fistula was caused by the great sloughing owing to the severe bruising of the tissues during the extraction of the large fragments of the stone. It was a matter of doubt whether the severe secondary hæmorrhage was owing to the free division of the prostate, or to the great sloughing above referred to.

In Case 20 there was very free extravasation of urine into the scrotum and parts around, but free and early incisions prevented any considerable sloughing, and patient went out perfectly cured.

With the exception of these two cases, all the other patients made good recoveries, and left the infirmary completely cured.

TOXTETH PARK WORKHOUSE INFIRMARY, LIVERPOOL.

FOREIGN BODY IN ORBIT.

(Under the care of DR. LYSTER.)

FOR the following notes we are indebted to Mr. Roger Edwards, resident medical officer.

S. A. C——, aged twenty-six, was admitted on Jan. 14th, 1876, and gave the following history:—In August, 1875, her husband, who had a pipe in his hand at the time, gave her a severe blow in the face, causing a wound which extended from the inner side of the right eye to the mouth. She was unable to open the eyelids, and had severe pain in the eye. She was immediately taken to a hospital, where she remained twelve days, but left of her own accord. Since that time she has been suffering from very severe pain in the orbit, inability to open the eyelids, and a copious discharge.

On admission there was a big scar on the right side of the face, extending from the eyebrow to the angle of the mouth, implicating the upper eyelid at its inner part. The patient was totally unable to open the lids; she had very severe pain in the orbit, together with a very profuse purulent discharge.

On raising the upper lid, the eye itself appeared quite healthy, with the exception of a little conjunctivitis on the inner side; vision was quite perfect. After a careful examination a white object (round) was seen far back along the inner wall of the orbit; this on being touched with a probe gave a gritty sensation. Coupling this with the previous history, it seemed very probable that it was a portion of the pipe that had escaped observation. A small forceps was introduced, and the foreign body removed

easily, when it proved to be a portion of an ordinary pipe-stem one inch long and three-eighths of an inch in diameter. There was slight bleeding at first, but in a few days the eye was free from pain and the patient able to open her lids sufficiently for the purpose of good vision.

HÔPITAL TEMPORAIRE, PARIS.

COMPLETE OBLITERATION OF THE SUPERIOR EXTREMITY OF THE PHARYNX; OPERATION; APPLICATION OF AN APPARATUS IN ORDER TO MAINTAIN AN OPENING.

(Under the care of M. LUCAS CHAMPIONNIERE.)

PROFOUND lesions of the pharynx are not rare after chronic sore-throats, and have of late been the subject of special study. Syphilitic and scrofulous disorders of this organ have also been treated of by various authors; but there is a form of lesion which is still very little known, and that is the complete obliteration of the posterior orifices of the nasal fossæ. The following observation gives a fair idea of the disease, and of the difficulty of its treatment. The application of a new operative method makes it specially interesting.

A milliner, aged nineteen, presented herself at the hospital, in June, 1875, complaining of being able to breathe only by the mouth. She was unable to blow air through the nose, and was extremely deaf. The senses of taste and smell had been completely lost. When she talked it was difficult to understand her. When she was twelve years old she was subject to sore-throat, which lasted a long time; and, little by little, she began to feel a great difficulty in breathing. Upon local exploration, the soft palate was found to adhere to the superior extremity of the pharynx. The wall of the pharynx seemed to be drawn forward. The posterior pillars were no longer prominent, and were united to the wall of the pharynx. Upon the median line there were the remains of the uvula. All these parts were of a deep-red colour. It was extremely difficult to touch these parts, as they were very sensitive; it was, however, easy to feel that there was there a considerable thickness of tissue, and on passing a sound through the nose it was not possible to feel it from the mouth. The general health of the patient was satisfactory, and there was no history of syphilis.

The patient was put under a treatment consisting of bromide of potassium, in order to render the throat less sensitive, and the operation was performed on July 23rd, 1875. After some very laborious operative manœuvres, and with the aid of a few incisions, M. Lucas was enabled to pass a Belloc's sound into the mouth through the nose. The orifice thus obtained was then enlarged on either side. Two india-rubber tubes were introduced through the nasal fossæ, and were passed through the aperture in order to keep it from closing.

Three weeks later the tubes were withdrawn, and the patient was able to smell and taste; her hearing had considerably improved also. She then left the hospital, highly satisfied with the results of the operation. The amelioration unfortunately was not of long duration, and at the end of September she returned to consult M. Lucas.

The obliteration was, if anything, more complete than before, and all the symptoms had reappeared. M. Lucas decided upon performing a second operation, and this time to make a much larger opening than before. On the 23rd October the patient was operated on for the second time. An incision was made in the median line of the soft palate, which was prolonged to the posterior wall of the pharynx. Then, with the aid of curved scissors, two strips were taken off the sides, and a large orifice was thus obtained. Three silver sutures were placed in the palate, and tubes were passed as before in order to prevent the closing of the wound. The first two or three days after the operation the patient had a little fever, and the face was considerably swollen. However, these symptoms soon subsided, and three weeks after the operation the tubes were withdrawn, and the wound was completely healed. The hearing and taste returned with the power of smell; the speech was still a little indistinct, and, at times, she passed her food back through the nose in trying to swallow it. A small apparatus, made by M. Collin, was then adapted to the opening. It consists of a silver tube with two branches, which are fixed on to the last molar tooth on either side. It is very light and easily adapted, the patient putting it in and taking it out herself.

The results of the operation this time have been most satisfactory. The patient is able to blow through the nose and to breathe freely. She tastes her food, and is able to smell perfectly well. This condition has maintained itself to the present date, and the patient continues to report herself every week at the hospital. M. Lucas, however, is of opinion that the patient will never be able to leave off the small apparatus without fear of a reproduction of the obliteration. It is even possible that her present apparatus may have to be changed for a more perfect one, as with this one her voice has a strong nasal intonation.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE ordinary meeting of this Society was held on the 14th inst., Sir James Paget, President, in the chair. A lengthy and interesting contribution to the mechanism of respiration was supplied in a paper by Dr. Douglas Powell, in which certain novel facts bearing upon the elasticity of the lungs and of the chest-wall received full exposition. In the discussion which followed, Drs. Day, James Pollock, Cotton, Sibson, and Mr. Morris took part.

The following is an abstract of a paper entitled "On some effects of Lung Elasticity in Health and Disease," by R. DOUGLAS POWELL, M.D., F.R.C.P. In this paper, after a reference to the views of Hutchinson and Hyde Salter on the mechanism of respiration, it is observed that, as now admitted by the best physiologists, in the position of thoracic repose—i.e., at the end of quiet expiration—the contractility of the lungs is exactly counterpoised by the elastic resilience of the chest-wall. This elastic resilience, tending to expand the chest, may be termed the "excentric thoracic resilience." The presence of this excentric thoracic resilience in health was pointed out by Dr. Salter, and has been incidentally further demonstrated by Mr. Le Gros Clark's more recent experiments to show the "passive tension" of the diaphragm. The resilience of both thoracic wall and diaphragm, tending excentrically, and thus to increase the capacity of the chest, takes an important part in facilitating the respiratory act. The thoracic resilience in calm breathing helps inspiration and eases the recoil in expiration, thus exercising a spring-like function countervailing the lung elasticity in each way. (The diaphragmatic resilience is probably mainly derived from the "spring" of the thoracic margin to which it is attached.) Most authors regard thoracic elasticity as acting counter to inspiration, and Dr. Salter assumed that it was in favour of inspiration only at the very commencement of that act. It is important, therefore, to compare the range of chest expansion in calm breathing with the degree to which the chest will expand by virtue of the excentric thoracic resilience alone, as ascertained by experiment upon the dead subject. The measurements of Hutchinson, Burdon-Sanderson, and Sibson, show the expansion of the chest in quiet breathing to be very small—viz., from 1 to 2 millimeters. In some experiments by the author he has found the range to be slightly greater, but variable in different persons. In one observation of expansion of chest by virtue of excentric resilience, upon the dead subject, Dr. Salter found that on cautiously opening the pleural cavity so as to allow the lungs to collapse, and thus to liberate the chest-wall from their traction, an expansion of 1 millimeter was recorded. The author has repeated this experiment with slight modification in ten cases. In one case, in which the chest was quite healthy, the expansion recorded was 3·19 mm. In three other cases, in which the chest was not quite healthy, expansions of 1·6, 2·1, and 2·4 mm. were recorded respectively. In six cases in which œdema or emphysema or adhesions were present, no

result was obtained. It thus appears that in health the thoracic resilience favours inspiration throughout, and that probably even at the termination of quiet inspiration there is still a small tendency to expand in reserve. The facts and inferences above alluded to are of much interest in their clinical bearings. In emphysema the elastic tension of the lung is loosened, so that the excentric thoracic resilience becomes less and less opposed as the emphysema increases. In extreme cases the inertia of the chest-walls and the resistance of the lung are no longer countervailed by thoracic resilience, hence the uneasy jerk with which the act of inspiration (mainly thoracic in this disease) commences. The view of Stokes, still held by most who have followed him, that the chest in emphysema was expanded and organs displaced and compressed by the large lungs, is untenable. Some observations of M. Woillez on the expansion of the chest during the febrile state are alluded to. The relationship between cardiac displacement and intra-thoracic pressure is then discussed, a table of seventeen cases of pneumothorax and three cases of empyema being referred to, in which the intra-thoracic pressure has been tested by the author. Experiments already published are also alluded to as bearing upon the subject. The results of these latter observations and experiments seem to show that the view before expressed by the author is correct—viz., that in all cases of effusion into the pleura displacement of the heart is at first affected by the traction of the lung from the healthy side upon the mediastinum—rapidly in the case of pneumothorax, gradually in fluid effusion. When further accumulation takes place, the heart, of course, becomes further displaced by direct pressure.

Dr. DAY pointed out that in many cases in which there was a large tumour or collection of fluid in the abdomen, with displacement of viscera upwards, and consequent diminution of the thoracic cavity, there was yet no dyspnœa or evidence of embarrassed breathing. In such cases no difference, so far as the pulmonary functions were concerned, was effected by the removal of the tumour or fluid. He presumed this immunity to be due to some peculiar action of the diaphragm; and thought that in women who had borne children the abdominal parietes come forward, and thus relieve the diaphragm.—Mr. MORRIS had been under the impression that the separation of the walls of the mediastinum during inspiration was an effect of the expansion of the chest-walls by muscular action, by which the lungs receive more air, and pressure is taken off the contents of the thorax generally. Thus more fluid flows into the great vessels. The descent of the abdominal viscera was due to the contraction and descent of the diaphragm. About thirty years ago Mr. Shaw pointed out the assistance rendered to the circulation, especially of the portal system, by the aspiratory effect produced by the expansion of the thorax. He showed that during inspiration the direction of the vena cava is rendered straighter as it passes through the diaphragm, and the flow from the hepatic veins facilitated by the diminution of the obliquity of their orifices. In the same paper Mr. Shaw pointed out the effect of inspiration in facilitating the flow in the thoracic duct.—Dr. JAMES POLLOCK thought that Dr. Powell's experiments were very important, and that it was too much the custom to overlook the natural resiliency of the ribs and of the lungs in the respiratory movements. He pointed out that the different effects produced in a pneumothorax with and in one without a valvular opening were due to the fact that in the latter case the pleura becomes more and more distended with air, which cannot escape, and thus a very high pressure is obtained. The amount of displacement undergone by the heart in cases of pleural effusion was frequently greater than could be accounted for by the quantity of fluid; and to this an explanation was afforded by Dr. Powell's view that in such cases the heart is drawn over by the natural tension of the sound lung. Frequently the return of the heart to its normal position is very slow and gradual; and he referred to a case in which an interval of two years and a half occurred between the time of displacement and the return to normal position.—Dr. COTTON, referring to the movements of the chest in emphysema, pointed out that in the majority of cases there was recession of the soft parts during inspiration. This, which he had long observed, was borne out by Dr. Powell's statements with regard to the passive part played by the lungs in emphysema. — Dr. SIBSON said that no doubt the recession of the lower part of the chest in emphysema during inspiration was due to atmospheric pressure. The depression of the heart in emphysema was not due to the pressure of the lungs so much as to the inclination of the diaphragm upon which the heart rests, allowing that organ to come forward during inspiration. He had never seen any movement which depended upon a single cause, all bodily movements being the resultants of component forces. Thus the amount of displacement undergone by the heart in pleural effusion was due to other factors, in addition to the single one of the resilience of the sound lung. He had frequently followed the return of the heart to its normal position during the removal of fluid from the chest.—Dr. POWELL, in reply, said that Mr. Le Gros Clark had described a condition of "passive tension" of the diaphragm under certain conditions, such as those to which Dr. Day had referred. He agreed with Mr. Morris with regard to muscular action playing a large part in the expansion of the thorax, but his (Dr. Powell's) observations referred also to the dead subject where the elastic resilience of the chest-wall tended to keep the layers of the mediastinum apart. This force operates constantly, in all conditions—inspiration, expiration, and repose, although it is increased in inspiration. With regard to the displacement of the heart in cases of pleuritic effusion or air in the pleura, he did not mean to deny that the pressure of the air or fluid took any part in its production, but he contended that some displacement takes place in an early stage before any pressure of fluid or air could come into operation.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

THE ordinary meeting of this Society was held on Friday, March 10th, Sir W. Jenner, President, in the chair. A very important paper on a successful case of gastro-enterotomy, an operation revived by Mr. Maunder, was read. The patient, who was to have been present, was unable to come, owing to an attack of gout. Then followed two cases which raised the question of distal ligature in aortic aneurisms, on which some discussion ensued as to the time when it is advisable to operate in suitable cases.

Mr. MAUNDER read a case of Gastro-enterotomy, with the formation of an artificial anus in the small intestine. The patient, a man sixty-eight years of age, had suffered for many years from constipation, for which he was in the habit of taking aperients. Six weeks before his attack he passed some blood per anum. On October 23rd, 1874, he had a severe attack of constipation, with pain in the bowels, which was relieved by aperients. On the 28th he had another attack, with much pain; the abdomen was found to be tender, distended, and tympanitic, and a hard semi-globular fixed swelling was felt a little below the umbilicus, towards the right side. Aperients gave no relief. On the following day there was great pain, especially in the right iliac region, of a severe paroxysmal character, which was followed by a sense of gurgling in the bowels. Temperature 97·5°; pulse 68. At 2 P.M. Mr. Maunder was called in consultation by Mr. Gordon Brown, under whose care the patient had been. A large enema removed a few scybalous masses from the rectum. On the 30th the injection of five pints of water was not followed by any result, and it was concluded that the large intestine was empty, and that probably the obstruction was seated in the small intestine near its entrance into the cæcum. Hiccough had meanwhile set in. Belladonna was administered. On the 31st the patient was weaker, the coils of small intestine distended, and their outline visible. The intestine was tapped with a fine trocar and cannula, but no other operation was allowed. On November 3rd the patient was slightly better, but vomiting was constant. The operation having been consented to, was performed by Mr. Maunder under ether and chloroform, an artificial anus being formed in the region of the right iliac fossa. An incision was made about midway between the umbilicus and

the right anterior superior iliac spine, a little below the level of a line drawn between the two points, the length of incision being about one and a half inches; the skin, fascia, muscles, and finally peritoneum being divided for half the length of the wound. The bowel presented, but did not protrude. A minute opening was made in the bowel to allow of the escape of gas, and the gut seized before it could retreat into the peritoneal cavity, and drawn forward into the wound so as to close the opening, and a fine fishing-gut suture and then silver-wire sutures introduced, the latter to form six sutures after opening the bowel. The bowel was then opened so as to admit the index finger, when a large quantity of gas and rusty black, semi-solid fæces escaped. Mr. Maunder detailed the steps of the operation. The patient recovered without a bad symptom, and on November 16th sat up for an hour. On the 23rd he was getting up several hours daily, and was able to walk about the room. Mr. Maunder recapitulated the grounds of the diagnosis, the fact of a tumour being felt, of a large injection being given readily but without relief, the absence of great distension, especially in the region of the large intestine, and the early vomiting, leading to the conclusion that it was a growth in the region of the cæcum, involving the small intestine. Belladonna was given to relax spasm; nutrient enemata were employed when vomiting set in. Mr. Maunder referred to Mr. Macarthy's successful case (reported in the Medico-Chirurgical Transactions, vol. lv.), which operation he had advised. According to Trousseau, the lower end of the ileum can be easily reached by an opening in the right inguinal region. The conditions essential for the success of the operation were—that the general contents of the abdomen should not be interfered with at all; that the abdominal incision should only be as large as was necessary, and only a sufficient opening be made in the bowel; that nothing should be allowed to enter or escape from the peritoneal cavity, and to this end the opening should be plugged, as it were, with the bowel. The great difference between this operation and that of gastrotomy, where the incision must be large and the obstruction be searched for, was also insisted on. He could hear of no other successful case of similar operation in Britain except one by Mr. Wagstaffe, recorded in the St. Thomas's Hospital Reports for 1873. Nor was the operation mentioned in modern text-books of surgery, excepting in that of Mr. Holmes. The patient is now in good health, and wears a sponge-tent or india-rubber bag specially contrived in the opening. In two cases only had Mr. Maunder recommended this operation, and in both it had been successful. He believes valuable lives will be saved by it.—Mr. BROWN, under whose care the patient had been, had seen him during the last few days. His health had improved since the operation; he could walk four miles a day. He had never the least inconvenience from the opening, and scarcely ever any flatus was passed. The patient gives himself an injection of warm water every morning through the opening, which relieves the bowels for the day; they only act through this opening. The tumour is now more distinctly felt, but the patient nevertheless gains flesh.—Mr. THOMAS SMITH mentioned a case, the only one in which he had attempted a similar operation, of a gentleman who had an axe-wound in the abdomen seven years previously, which caused protrusion of the bowels. Since the accident he had been liable to attacks of constipation at intervals, which were relieved by croton oil. An attack of unusual severity, however, was unrelieved by the usual means, and Mr. Smith was consulted. The patient, who was very ill, was treated with opiates, but without relief. It was believed that the morbid condition consisted in adhesion of the bowel to the scar of the wound, and consequent partial obstruction. An operation was therefore suggested, but was not consented to until all other hope was gone. It was performed by an incision over the scar, the other steps of the operation resembling those in Mr. Maunder's case. The operation was successful, so far as opening the bowel was concerned, but it was too late to save the patient's life.

Dr. GREENHOW read a case of Aneurism of the Arch of the Aorta spontaneously cured, with obliteration of the left carotid and subclavian arteries. The patient, a married woman, forty-five years of age, was admitted into the Middlesex Hospital on Nov. 22nd, 1875. She had been subject to cold and cough; but for four years had suffered from palpitation, and for two years from cough and short breath. Twelve weeks before admission she had sudden rigors, pains in the left side of the chest, dyspnœa, and cough. On admission there was great dyspnœa, the respirations being laboured, 32 per minute; left lateral recumbency, with some oppression on being turned to the right side. The left side of the chest was enlarged, tense, and motionless, the intercostal spaces obliterated, and there was œdema of the integuments of the left chest. The physical signs were indicative of extensive fluid effusion in the left pleura. There was entire absence of pulsation in the left carotid and subclavian arteries, but pulsation in the suprasternal and supraclavicular regions; the pupils were equal; there was no dysphagia, and the left arm appeared normal. Tapping the chest was twice attempted, but without success. On Dec. 3rd there were signs of sphacelus of the left breast, and the patient died two days later. At the post-mortem the left pleural cavity was found to be full of pus, containing three pints, the lung collapsed, and two fistulæ had formed through the thoracic walls. In the upper part of the thorax was a large aneurismal sac, adherent to the sternum and to the left lung, and filled with compact coagulated fibrine. This sac, which was ovoid in shape, and ten to eleven inches in diameter, sprang from the arch of the aorta, between the left carotid and subclavian arteries, which were adherent to, and involved in, the wall of the sac for some distance; the carotid being obliterated and the subclavian narrowed. The innominate artery was quite away from the aneurism, and the left thyroid axis sprang from the subclavian beyond the obstructed portion of that artery. The aorta was atheromatous and dilated. Dr. Greenhow remarked on the want of success in the attempted paracentesis, which he thought was owing to the trocar entering the lung. Probably the circulation both in the left carotid and subclavian was almost or quite cut off during life. He had brought the case forward on account of its bearing on the surgical treatment of aneurism, especially in reference to Brasdor's operation of distal ligature as applied to aortic aneurism.

Mr. HOLMES read some particulars of a case of Distal Ligature of the Left Carotid Artery for Aortic Aneurism, now under his care. The patient, a girl twenty-one years of age, was admitted under Dr. Dickinson in December, 1874, in an alarming condition, with severe symptoms due to a large aneurismal sac in the upper part of the chest. She was transferred to Mr. Holmes's care for the purpose of trying Tufnell's treatment, which was done with much benefit. The aneurism subsided, the pulsation diminished, and bronchitis and hæmoptysis, which before existed, greatly improved. In October she was sent to the Convalescent Hospital, whence she returned not so well. At that time the thrill and pulsation above the clavicle, and in front of the chest, were distinct, but there was no pulse in the left axillary or brachial artery, though pulsation was subsequently felt at times in the ulnar artery and brachial. Carotid pulsation was distinct. As it was obvious that no further good was to be expected from rest, the operation of distal ligature, as first suggested by Dr. Cockle, was successfully performed by Mr. Holmes, on October 21st. The pulsation of the aneurism was diminished by the operation, but its size was but little altered, and it is now much the same as it was soon after operation. Mr. Holmes thought that the aneurism was probably of different shape from that in Dr Greenhow's case, and not sacculated, involving most probably the whole circumference of the aorta. But the carotid portion of the aneurism was probably obliterated, and there was sufficient advantage from the operation to justify it.—Dr. DOUGLAS POWELL thought it a matter of great importance that we should know *when* the operation should be performed in these cases. He related a case which had been under observation for three years, which was treated on the abstinence-and-rest system for eleven weeks with no apparent benefit. In that case he was desirous of trying the effect of distal ligature, but in consultation with his colleagues he came to the conclusion to wait, and was glad that he had done so, for great improvement occurred when the patient got up again and moved about. In that case the left radial pulse was nearly obliterated.—The PRESIDENT inquired whether there was any history of injury, aneurism being so rare in such a young subject. He mentioned a case of aneurism in a young man in whom there was no history of injury, until, on careful inquiry, it

was found that he had fallen across a railway sleeper some years before.—Mr. HOLMES had carefully inquired, but there was no history of injury of the kind.—Dr. YEO inquired at what situation paracentesis was performed in Dr. Greenhow's case, and condemned puncture in the back as likely to enter the lung.—Dr. GREENHOW replied that it was done, first, at the posterior border of the axillary space, and then an inch further forwards. No doubt the lung was punctured, but the widely diffused pulsation of the heart rendered it undesirable to puncture further forwards.—Dr. POWELL asked whether Mr. Holmes's patient had had rheumatic fever, and instanced a case of a girl seventeen years of age with a similar aneurism, in which it was distinctly traceable to rheumatism.—Mr. CHRISTOPHER HEATH remarked that the cases proved that ligature in one of the main arteries of the neck has an effect on aortic aneurism. In a case where he had ligatured the carotid and subclavian for supposed innominate aneurism, the condition of the patient was much improved, but he died, and the aneurism was found to be aortic. The operation, however, relieved him, and probably prolonged life. So in the case he had seen with Dr. Cockle, and operated upon four years ago, the patient was still living. Mr. Holmes's case, too, showed the great advantage of the ligature. But the great difficulty lay in knowing which artery to tie, because it is not clear whether we can so infallibly map out the aneurism as to tie the vessel immediately next beyond the sac, which was Dr. Cockle's principle. It had happened to him to tie the wrong carotid—viz., the left—for aneurism in the neck of doubtful nature, and the patient died of consequent anæmia of the brain, the circulation being already obstructed in the right carotid by pressure. The sphygmograph, although employed for him by various able physicians, had afforded no aid in diagnosis, the testimony of various observers not being in agreement. It was very difficult to say when surgical interference should be sought; but when the physician had given up the case the surgeon should at any rate have a chance, and it was eminently a subject for experimental research.—Mr. MAUNDER considered the cases illustrative of the benefit of the application of morbid anatomy to practice. He thought that Mr. Holmes's patient was much benefited by the rest and limited diet, and asked whether it was resumed on her return to the hospital, and whether digital compression was tried in order to ascertain its effect on the pulsation. The surgeon should have a chance in these cases. In Dr. Powell's case the abstinence seemed to have been carried to the point of making the heart irritable, but it probably did good.—Dr. MAHOMED defended the diagnostic value of the sphygmograph in these cases, and mentioned instances in which a correct diagnosis had been arrived at by its means, which otherwise would have been impossible. He thought it was always possible to say within very slight error which vessels were affected. The only case in which he had been mistaken was one in which there was great obstruction of the subclavian by endarteritis.—Dr. CAYLEY asked whether the pulsation in the temporal arteries in Mr. Heath's case had been noticed, and whether it was retarded in one or other.—Mr. THOS. SMITH referred to a case of aneurism of the common femoral in a boy twelve years old, in whom he ligatured the external iliac; the boy died later of aortic aneurism. In estimating the value of distal ligature, we must bear in mind the enforced rest and quiet after the operation as one possible factor in the issue.—Mr. CALLENDER was glad to hear Mr. Tufnell's treatment referred to. Dr. Andrew had, he believed, had brilliant results from it in a number of cases; and he himself had also had a case in which it was of great benefit.—Sir WM. JENNER thought that Dr. Powell's case probably did benefit much by the treatment, as shown by the great improvement when he got up and walked about.—Mr. HOLMES, in reply, said that he brought forward the case to show the great benefit of ligature of the carotid. He took a mechanical view of the matter; and whilst he believed that ligature of the carotid or innominate was of use when the aneurism was ascending along them, he did not believe there was any advantage to be gained from ligature of the subclavian in its third part, on account of the increased pressure induced in the first and second parts. Therefore he always advised early ligature of the carotid. It was, however, a grave operation, and should not be resorted to until rest and other means had been fairly tried, with the intelligent concurrence of the patient; and then only after grave consideration.—Mr. HEATH said Mr. Holmes's rule was good if true; but it must be borne in mind that in many cases the sac did not point where it was expected, and therefore it was not always the vessel which appeared to be in continuity which was to be tied. What we want to know is the exact position of the aneurism.—The PRESIDENT inquired whether the lung could have expanded in Dr. Greenhow's case. If not, the pus might not be able to flow out, although the cavity was tapped.—Dr. GREENHOW was convinced that the lung was tapped, as there was no pus on the trocar. He agreed with Mr. Holmes that rest should be tried, although much difficulty was found in some cases in maintaining it long enough. In a case where it was persisted in for eight months, no great benefit appeared to result whilst at rest, but on getting up great improvement seemed to occur; and the patient was still living, two years later, and able to work as a railway clerk. In another case, where tried for five or six months, the patient was very obstreperous, and said he was starved, and finally insisted on getting up; although ultimately the case was fatal, much good was done.

MEDICAL SOCIETY OF LONDON.

AT the meeting on the 13th inst. Mr. WM. ADAMS delivered a Presidential Address on Subcutaneous Surgery—a subject which he selected partly in consequence of the forthcoming celebration in Hanover of the fiftieth anniversary of the admission of Stromeyer to the Doctorate of Gottingen, an event in which many English surgeons had decided to participate, by offering an address to Stromeyer on the occasion of this jubilee, and requesting him to sit for his bust to be executed in marble, to be deposited in the Royal College of Surgeons of England. Mr. Adams then spoke of Stromeyer as the founder of subcutaneous surgery, by the operation of subcutaneous tenotomy, which he perfected and performed in the year 1831, and also adverted to the distinguished position he had held for many years as a military surgeon, acting as surgeon-in-chief of the Schleswig-Holstein army in the campaigns of 1848 and 1851, and also as surgeon-in-chief with the 3rd Army Corps, commanded by the Crown Prince of Prussia, during the recent Franco-German war. Stromeyer's objections to the operation of trephining in cases of depressed fracture of the skull were mentioned. Mr. Adams then alluded to the circumstance of subcutaneous tenotomy having been introduced into England by Dr. Little, who had been operated upon by Stromeyer in the year 1836, and who himself performed the operation in London in the year 1837. But Mr. Whipple, of Plymouth, had divided the Achilles tendon subcutaneously in May, 1836, and was not at the time aware of its having been performed on the continent. The law of subcutaneous surgery, Mr. Adams observed, was first enunciated by Hunter in his "Treatise on the Blood, Inflammation, and Gunshot Wounds," published in the year 1794; and there can be no doubt that he first recognised as a great fundamental principle, in reference to the healing of injuries, the difference between those two forms of injuries, of which one is subcutaneous and the other open to the air. Hunter observes, "The injuries of the first division, in which the parts do not communicate externally, seldom inflame, while those of the second commonly both inflame and suppurate." Although Hunter did not apply this law to surgical practice, he divided tendons subcutaneously by introducing a couching needle under the skin at some distance from the tendons, in his experiments on animals to ascertain the nature of the process by which divided tendons are reunited. The subcutaneous law in its practical significance was more fully recognised by M. Jules Guérin in the year 1841, and to him we are indebted for its development and surgical application.

A large number of surgical operations performed on the subcutaneous principle, and depending for their safety on the subcutaneous law, were then enumerated, Mr. Adams observing that the list had been of late years still further enlarged by various operations for anchylosis, by subcutaneous osteotomy, performed by himself and other members of the Society, more especially by Mr. Gant, Mr. Bryant, and Mr. Maunder. All these operations, Mr. Adams re-

marked, are governed by the same general law, and their history forms but a portion of the general history of pathology and scientific surgery, amongst the latest and most practical improvements in which they form a prominent and important part.

Reviews and Notices of Books.

Transactions of the New York Academy of Medicine. Second Series. Vol. I. New York: D. Appleton and Co. 1874.

Transactions of the Medical Society of the State of New York. For the year 1875. New York: G. P. Putnam and Sons. London: Sampson, Marston, Low, and Searle. 1875.

Transactions of the Medical Society of the State of Pennsylvania. At its Twenty-sixth Annual Session. Vol. X. Part 2. Published by the Society. Philadelphia. 1875.

Transactions of the Pathological Society of Philadelphia. Vol. V. Edited by James Tyson, M.D. Philadelphia. 1876.

THE above publications may fairly be regarded as representative of the nature and extent of those medical assemblies, which are apparently as popular in the United States as they are in the mother country. Nor is it simply as evidence of their popularity, but also of their activity in the cause of medical science that these Transactions of Medical Societies must be regarded. In some respects the volumes differ from those issued in England, and it can hardly be said that the points of difference are to the advantage of the United States. Thus in the first volume, that issued by the New York Academy of Medicine, there is at least one feature which detracts from the value of the book. It is, indeed, but an incomplete record of the proceedings of the Society; for although it contains reports of the business transacted at each meeting for three years, the paper of the evening is conspicuous by its absence. It is certainly peculiar to read, as we do here, a discussion upon a paper which, we are informed, has been printed elsewhere. Among the more interesting and valuable papers which, however, do find a place, may be mentioned Experiments on the Glycogenic Function of the Liver, by Dr. J. C. Dalton; Spectrum Analysis applied to Medical Science, by Dr. Wabime; On the History and Treatment of Acute Uræmia, by Dr. Loomis; and on Cerebro-Spinal Fever, by Dr. Lewis Smith. Instituted in 1847, the Society has with this volume commenced a new series of its Transactions, the printing and paper of which are excellent. There are but few illustrative woodcuts, and we may commend, for the consideration of future editors, the advice given by Dr. Austin Flint in his Presidential Address for 1873, in which he urged the publication of a yearly volume, to rank as high as the Transactions of the Royal Medical and Chirurgical Society of London.

The New York State Medical Society is one of the oldest institutions in the States. Founded in 1806, it resembles much, in its aims and constitution, our British Medical Association. It is formed of a number of country societies, delegates from which attend the annual meeting of the general body, held every summer in various towns. At this meeting addresses are delivered and papers read. The anniversary address contained within the present volume is by Dr. Jackson Fisher, President, in which the history of the Society is dealt with. Appended to the address is a classified list of all the papers contributed to the Society since its foundation, together with a table of the presidents who have held office during these seventy years. The volume contains also the Merritt H. Cash Prize Essay, which, for 1875, was gained by Dr. Alex. Hutchins. It is a most interesting and practical paper upon "School Hygiene, with reference to the Physiological Relations of Age and Sex in Mental and Physical Education." It deserves perusal by all who are interested in female education. One of the papers in the volume, which bears evidence of most careful and painstaking research, is by a lady—namely, Dr. Mary Putnam Jacobi, of New York—the title of her communication being "The Action of Nitrate of Silver on Epithelial and Gland Cells. Dr. Otis contributes a paper "On the Radical Cure of Stricture of the Urethra," to which he appends a table containing 100 cases, treated after the method now familiar to the English reader. The discussions are reported, as indeed they are in all these publications. The volume contains, further, a few obituary notices of deceased fellows, the portrait of one of whom (Dr. James McNaughten, of Albany) adorns the volume as a frontispiece. This gentleman, who was much esteemed, and had held the office of president, died suddenly in Paris, in 1874. Reports on hygiene from the different country medical societies of New York close the volume.

The Medical Society of the State of Pennsylvania is a younger sister of the preceding. It held its twenty-sixth session in June, 1875, at Pittsville, and the present volume contains reports of the proceedings at that meeting. The President, Dr. Attlee, discoursed upon "Old and Young Physic," in an able and somewhat witty address. Various reports on hygiene, mental disorders, and medical matters connected with each of the country medical societies comprise the bulk of the volume, which concludes with a code of medical ethics.

The last volume in the above list comprises the Transactions of the Pathological Society of Philadelphia, which has now existed nearly nineteen years. It has not yet, however, attained to the pitch of excellence of the London Society, although it is but six years younger. This may be imagined, since the present is only the *fifth* volume of its Transactions, comprising the proceedings of the Society from January, 1874, to July, 1875. In arrangement it is an exact copy of the London Pathological Transactions. It would be well if the Philadelphian body would follow a little more closely in the steps of that Society, for several of the specimens shown have absolutely no word of explanation attached to them. The Morbid Growths Committee have been very active, and the discussions are fully reported. The few woodcuts are no credit to American enterprise; with one or two exceptions, they might well have been spared.

The Journal of Anatomy and Physiology. Conducted by Professors HUMPHRY, TURNER, FOSTER, and RUTHERFORD. Vol. X., Part II. January, 1876.

THIS important *Journal*, the management of which has been strengthened by the accession of Professors Foster and Rutherford, is now to be issued quarterly, instead of semi-annually, and is well deserving the general support of the profession. The present part contains an unusual number of excellent papers. The first is a contribution to the Anatomy of the Lens, by G. Thin, in which he shows the presence of certain serially-arranged cells by treating the cornea with chloride of gold. 2. On the Central Nervous System, the Cephalic Sacs, and other points in the Anatomy of the Lineidæ, by W. C. M'Intosh. This paper, which is illustrated by four plates, gives a good description by a competent observer of the nervous system in a group of Nemerteans. Dr. M'Intosh was recently entrusted with the duty of publishing a volume on the Nemerteans for the Ray Society, and this may be regarded as a continuation of the researches which led to the production of that work. 3. Experiments on the Biliary Secretion of the Dog, by William Rutherford. These experiments were undertaken to settle the question whether the action of certain purga-

tives on the flow of bile differed according to whether the animal was fasting or had been recently fed, and Dr. Rutherford answers it in the affirmative, so far as podophyllin is concerned—that is to say, that purgatives increase the quantity of bile in fasting, but not in recently fed, animals (dogs). He finds that when either podophyllin, rhubarb, aloes, or colchicum, is administered, the liver is excited to secrete more bile. If purgation result, the absorption of biliary matter and of food—if digestion be taking place—from the intestine is probably diminished. Hence by the twofold operation of increased hepatic action and diminished secretion of biliary matter from the intestine, the composition of the blood as it passes through the portal system is probably rendered more pure. Upon the whole, however, powerful purgative action tends to *diminish* the biliary secretion, perhaps by producing a tendency to collapse. 4. On the Transformations of the Pulse-wave in the different Arteries of the Body, by A. L. Galabin. Dr. Galabin considers the dicrotic wave to be of centric origin, and thus explains it. When the influx from the heart suddenly ceases at the end of systole, the fluid for an instant continues to flow away out of the section on account of its acquired velocity, and the pressure in the section therefore rapidly falls, and the artery contracts. As soon as the velocity of the fluid is checked by the pressure in front a reflux takes place, which, being stopped by the valves, causes a second increase of pressure and second expansion. This is propagated as the dicrotic wave to the periphery. This paper is illustrated by many tracings. 5. Dr. Cunningham communicates a short note on the Broncho-œsophageal and Pleuro œsophageal Muscles—muscles the uses of which are not known and which are not always present. 6. The next paper is an able one from Dr. Stirling on the Summation of Electrical Stimuli applied to the Skin—too long to abstract, but the pith of which is that "reflex movements can only be liberated by repeated impulses communicated to the nervous centres," and he shows that various apparently simple stimuli are in reality compound or summated. 7. On the Development of Elasmobranch Fishes, by F. M. Balfour—a paper that contains part of a systematic series of researches on the sharks made by Mr. Balfour at Naples during the last two or three years. 8. A paper by Mr. Huxley on the Crano-facial Apparatus of Petromyzon, unfortunately not accompanied by the plates illustrating it, which will be published in the next part. 9. The Secondary Arches of the Foot, by S. Messenger Bradley. Lastly, a Note on the Placental Area in the Uterus of the Cat after Delivery, by Professor Turner.

A Text-Book of Human Physiology, designed for the Use of Practitioners and Students of Medicine. By AUSTIN FLINT, jun., M.D., Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, &c. Illustrated by Three Lithographic Plates and Thirteen Woodcuts. London: H. K. Lewis.

THIS work is, the author states, a condensation of his large treatise in five volumes, the several parts of which, with the exception of the last, we have noticed as they successively appeared, rendering it therefore unnecessary that we should do more than make a few general observations. Dr. Flint states, in addition, that he has condensed his larger work. On looking through both, however, we do not find that he has done more than exercise a little judicious pruning, and, apart from references and matters of historical interest, the purchaser of the single volume will possess the major part of the five volumes previously published. A great improvement in the new work is the introduction of a large number of woodcuts, some of which, as those taken from Sappey's work on Anatomy, are of the highest artistic elegance. Those taken from photographs of preparations in the United States' Army Medical Museum, though no doubt perfectly accurate, are, with one or two exceptions, failures, and would have been more serviceable to the student if they had been to some extent idealised.

Taken as a whole, Dr. Flint's work is an extremely valuable one. Accurate, full without being discursive, well-balanced in the proportionate space devoted to each subject, clearly and intelligently written, it contains all that the ordinary student need know. Nor is it deficient in original investigations, as a reference to the chapters on the functions of the liver and kidney will sufficiently show. Here and there, as in every work of this comprehensive kind, points have been omitted; such, for instance, as Ranvier's observations on the structure of the nerve-fibres, and some recent researches on muscular tissue, that might have been advantageously introduced; but it is otherwise sufficiently complete, and we congratulate Dr. Flint on his happy termination of a very arduous task.

THE EFFECT OF PROLONGED MUSCULAR EXERCISE ON THE SYSTEM.

BY F. W. PAVY, M.D., F.R.S.

THIS week I have to communicate the results obtained during Weston's six days' walk, but before doing so there are two points to which it is advisable I should refer.

The first is as regards a statement made by Mr. Ashburton Thompson, in the last number of the *British Medical Journal*, which has thrown discredit on the validity of the investigations I have been conducting. The assertion is made that Mr. Weston has been in the habit of chewing certain dried leaves, those of the Erythroxylon coca, whilst pursuing his route, for the purpose of increasing his power of sustaining prolonged exertion. A somewhat lengthy dissertation is introduced about the properties and effects of these leaves upon the system, and it is suggested, upon the strength of a two-days' observation quoted, that they retard tissue waste, and diminish the elimination of urea—circumstances, it is affirmed, which must be taken into consideration before drawing any conclusions from the analysis of Weston's urine, now in course of publication.

It is to be regretted that, before advancing such a proposition, Mr. Thompson did not obtain more precise information. Already his statement has been copied into the public journals, and various kinds of comments made. The fact is that Mr. Weston chewed some of the leaves in question during his first or twenty-four hours' walk, but only then. He has positively asserted, and this in the presence of Mr. Thompson, and the assertion is confirmed by his attendants, that not a single leaf was introduced into his mouth during either of his subsequent walks. It happens that in connexion with the first walk, my examination of the day's urine was only complete in the case of Weston's competitor. Through a mishap I was prevented from obtaining Weston's urine voided during the walk, and only procured a specimen passed an hour afterwards. It was not until the subsequent walking performances that my investigations assumed a systematic shape, and here, as stated, no invalidating influence on the coca-leaf hypothesis existed.

The other point has reference to the actual distance walked. From communications I have received I have learnt that a doubt exists in the minds of some regarding the reality of the distance named having been walked. It may be said, however, that the arrangements are such throughout as to preclude the possibility of any misrepresentation being made. If there is one thing more than another that may be relied upon, it is that the number of miles recorded are actually walked.

My last account embraced the observations conducted during the six days prior to the six-day walk. At a few minutes after midnight of Sunday, March 5, Mr. Weston started, sanguine of being able to walk 500 miles before

midnight of the following Saturday. Although then appearing well, yet during a part of the preceding week he had been feverish and weak from the cold under which he had laboured. This doubtless contributed to his failure in accomplishing more than 450 miles. Each day, indeed, the distance walked fell short of what he ought to have traversed to have succeeded in his undertaking. He did not become leg-tired or foot-sore, but appeared to possess a want of the proper amount of power to keep him going for the requisite time every day and with the requisite speed. It was more nervous than muscular exhaustion that was noticeable. In the absence of excitement he became drowsy, and sometimes experienced a great difficulty in keeping himself awake on the track. After an ordinary night's rest, when his task was finished, he got up and went about as though nothing unusual had been undertaken.

The food consumed upon this occasion comprised a much larger supply of solid material than had hitherto been taken. During the first day it was chiefly of a liquid nature, but afterwards the diet more and more consisted of ordinary food consumed at stated periods. The account was taken for me by Messrs. Brett and Hinton, of Guy's Hospital, to whom I am indebted for the assistance rendered.

Weight (without clothes) one hour and a half before starting, 8st. 11lb. 12oz.; pulse 72; temperature in mouth, 99·6.

First twenty-four hours of the six-day walk. — Distance walked, 96 miles. Amount of urine passed, 2356·9 c.c. (83 oz.); specific gravity, 1026·7; free acidity, reckoned as oxalic acid, 1·45 gramme in 1000 c.c. (·635 grain in 1 oz.); amber colour, clear. Microscopic characters: a few crystals of uric acid. Composition in 1000 parts:—

Water		952·52
Solid residue (dried at 240° F.) ...		47·48
Incinerated residue...	15·14	
Organic constituents—		
Urea	28·73	
Uric acid	1·95	
Other organic matters ...	1·66	32·34
Mineral constituents—		
Chlorine	2·85	
Sulphuric acid	2·08	
Phosphoric acid	2·82	
Soda	4·06	
Potash	3·06	
Lime	·17	
Magnesia	·08	
Loss...	·02	15·14
		47·48

Total quantity of solids excreted during the twenty-four hours—

Urea	69·531 grammes	(1072·38 grains)	
Uric acid	4·714	„	(72·67 „)
Other organic matters	4·007	„	(61·83 „)
Chlorine	6·929	„	(106·93 „)
Sulphuric acid ...	5·044	„	(77·15 „)
Phosphoric acid ...	6·835	„	(105·39 „)
Soda...	9·729	„	(151·13 „)
Potash	7·401	„	(114·18 „)
Lime...	·424	„	(6·48 „)
Magnesia	·212	„	(3·24 „)

Food consumed: Cooked meat, 3 oz. (underdone roast beef); 5 yelks of eggs; jelly, 2 pints; Liebig's extract, 1½ oz. by weight, taken as beef-tea; Brand's essence of beef, 1 oz. by weight; milk, 2½ pints; sea-moss farina blancmange, 2½ pints; oatmeal, 5½ oz., in the form of gruel; biscuits (Huntley and Palmer's), 2½ oz.; bread, in form of dry toast, 1 oz.; coffee, 2½ oz.; tea, ½ oz.; sugar, 8 oz.; grapes, 1½ lb.; 6 oranges.

Weight, without clothes, at the end of the twenty-four hours, 8 st. 9 lb. 12 oz.

Second twenty four hours of the six day walk. — Distance walked, 77 miles. Amount of urine passed, 1789 c.c. (63 oz.); specific gravity, 1029·4.; free acidity, reckoned as oxalic acid, 2·52 grammes in 1000 c.c. (1·10 grains in 1 oz.) Turbid from copious deposit of lithates. Microscopic characters: Amorphous lithate of soda, with a few crystals of oxalate of lime. Composition in 1000 parts:—

Water		936·71
Solid residue (dried at 240° F.) ...		63·29
Incinerated residue ...	11·21	
Organic constituents—		
Urea	43·21	
Uric acid	·99	
Other organic matters ...	7·88	52·08
Mineral constituents—		
Chlorine	·49	
Sulphuric acid	2·26	
Phosphoric acid	3·25	
Soda	1·26	
Potash	3·82	
Lime	·20	
Magnesia...	·09	
		11·21
Less excess	·7	
		63·29

Total quantity of solids excreted during the twenty-four hours:—

Urea...	79·610 grammes	(1228·23 grains)	
Uric acid	1·825	„	(28·10 „)
Other organic matters	14·491	„	(223·58 „)
Chlorine	·912	„	(14·04 „)
Sulphuric acid ...	4·168	„	(64·34 „)
Phosphoric acid ...	5·993	„	(92·42 „)
Soda	2·326	„	(35·79 „)
Potash	7·049	„	(60·80 „)
Lime...	·375	„	(5·71 „)
Magnesia	·179	„	(2·76 „)

Food consumed: Cooked meat 1 lb. 6½ oz. (lean of chop, boiled chicken, and minced chicken); 3 yelks of eggs; 4 poached eggs; jelly 1 pt. 3 oz.; beef-tea from fresh meat ½ pt.; Liebig's extract 4½ oz. by weight, taken as beef-tea; Brand's essence of beef 1½ oz. by weight; milk 1½ pts.; oatmeal 3½ oz. in the form of gruel; bread 3 oz. in form of dry toast; bread spread with butter 2½ oz.; potatoes 3 oz.; coffee 2½ oz.; tea 1 oz.; sugar ½ lb.; grapes ½ lb.; 1½ oranges.

Body-weight at the end of the twenty-four hours, 8 st. 9 lb. Temperature in mouth, 99·6°.

Third twenty four hours of six-day walk —Distance walked, 70½ miles. Amount of urine passed, 1732·2 c.c. (61 oz.); specific gravity, 1030·4; free acidity, reckoned as oxalic acid, 2·2 grammes in 1000 c.c. (·96 grain in 1 oz.). Turbid from copious deposit of lithates. Microscopic characters: Amorphous lithate of soda, and uric acid crystals. Composition in 1000 parts:—

Water		934·97
Solid residue (dried at 240° F.) ...		65·03
Incinerated residue ...	8·82	
Organic constituents—		
Urea	45·82	
Uric acid	1·56	
Other organic matters	8·83	56·21
Mineral constituents—		
Chlorine	·17	
Sulphuric acid ...	3·41	
Phosphoric acid ...	2·53	
Soda	1·02	
Potash	2·06	
Lime	·14	
Magnesia	·06	
		8·82
Less excess	·57	
		65·03

Total quantity of solids excreted during the twenty-four hours:—

Urea	81·404 grammes	(1256·00 grains)	
Uric acid	2·771	„	(42·74 „)
Other organic matters	15·752	„	(243·02 „)
Chlorine	·329	„	(5·09 „)
Sulphuric acid ...	6·042	„	(93·50 „)
Phosphoric acid ...	4·503	„	(69·43 „)
Soda	1·818	„	(29·08 „)
Potash	4·055	„	(70·21 „)
Lime	·259	„	(4·01 „)
Magnesia	·121	„	(1·85 „)

Food consumed: Cooked meat, 1¼ lb. (lean of chop, boiled chicken, and minced chicken); 3 yelks of eggs; 2 poached eggs; jelly, 2 pts.; beef-tea from fresh meat, ½ pt.; Brand's essence of beef, 5½ oz. by weight; oatmeal, 3½ oz. in the form of gruel; bread, 4 oz., in the form of dry toast; bread, 3 oz.; milk, 3½ pts.; potatoes, 6 oz.; coffee, 2½ oz.; tea, 1 oz.; sugar, 3 oz.; black currant jelly, 2 oz.; grapes, ½ lb.; 1½ oranges.

Body-weight at the end of the twenty-four hours, 8 st. 9 lb. 8 oz. Temperature in mouth, 99·7°.

Fourth twenty-four hours of six-day walk.—Distance walked, 76½ miles. Amount of urine passed, 1789 c.c. (63 oz.); specific gravity, 1029·2; free acidity, reckoned as oxalic acid, ·63 gramme in 1000 c.c. (·275 grain in 1 oz.); turbid from copious deposit of lithates. Microscopic characters: Amorphous lithate of soda. Composition in 1000 parts:—

Water		943·39
Solid residue (dried at 240° F.) ...		56·61
Incinerated residue ...	10·36	
Organic constituents:—		
Urea	30·89	
Uric acid	1·46	
Other organic matters ...	7·90	—— 46·25
Mineral constituents:—		
Chlorine	·50	
Sulphuric acid	2·28	
Phosphoric acid	2·43	
Soda	3·01	
Potash	2·43	
Lime	·27	
Magnesia	·06	
Less excess	·62	—— 10·36
		56·61

Total quantity of solids excreted during the 24 hours:—

Urea	67·982	gram.	(1048·93 grains)
Uric acid	2·683	,,	(41·35 ,,)
Other organic matters	15·278	,,	(235·74 ,,)
Chlorine	·930	,,	(14·35 ,,)
Sulphuric acid ...	4·204	,,	(64·81 ,,)
Phosphoric acid ...	4·472	,,	(68·97 ,,)
Soda	5·546	,,	(84·86 ,,)
Potash	4·472	,,	(68·97 ,,)
Lime	·51	,,	(7·87 ,,)
Magnesia	·125	,,	(1·93 ,,)

Food consumed: Cooked meat 1 lb. 3 oz. (lean of chop, boiled chicken and minced chicken); 1 yelk of egg; jelly 1½ lb.; beef-tea from fresh meat ½ pint; milk 2½ pints; bread 3 oz., in the form of dry toast; bread 6 oz.; butter 2 oz.; potatoes 6 oz.; coffee 6½ oz.; tea 1½ oz.; sugar 5½ oz.; black currant jelly 3 oz.; grapes 1 lb.; 1½ oranges.

Body-weight, at the end of the twenty-four hours, 8 st. 8 lb. 1 oz. Temperature in mouth, 99·5°.

Fifth twenty-four hours of the six-day walk.—Distance walked, 67 miles. Amount of urine passed, 1476·6 c.c. (52 oz.); specific gravity, 1031·06; free acidity, reckoned as oxalic acid, 1·89 gramme in 1000 c.c. (·83 grain in 1 oz.); exceedingly turbid from deposit of lithates. Microscopic characters: Lithate of soda, urio-acid crystals. Composition in 1000 parts:—

Water		941·32
Solid residue (dried at 240° F.) ...		58·68
Incinerated residue ...	14·55	
Organic constituents—		
Urea	40·25	
Uric acid	1·06	
Other organic matters ...	2·82	—— 44·13
Mineral constituents—		
Chlorine	3·12	
Sulphuric acid	1·85	
Phosphoric acid	2·76	
Soda	3·78	
Potash	2·23	
Lime	·23	
Magnesia	·09	
Loss	·49	—— 14·55
		58·68

Total quantity of solid matter excreted:—

Urea	61·295	grammes	(945·84 grains)
Uric acid	1·772	,,	(26·23 ,,)
Other organic matters	4·283	,,	(66·04 ,,)
Chlorine	4·756	,,	(73·29 ,,)
Sulphuric acid ...	2·821	,,	(43·51 ,,)
Phosphoric acid ...	4·209	,,	(64·96 ,,)
Soda	5·760	,,	(88·87 ,,)
Potash	3.397	,,	(52·31 ,,)
Lime	·340	,,	(5·24 ,,)
Magnesia	·096	,,	(1·43 ,,)

Food consumed: Cooked meat, 1 lb. 11½ oz. (lean of chop, boiled chicken, and minced chicken); 1 yelk of egg; jelly ½ pt.; beef-tea from fresh meat, 1 pt.; Liebig's extract 3 oz. by weight, taken as beef-tea; milk ½ pt.; sea-moss farina blanc mange ½ pt.; oatmeal 4 oz., in the form of gruel; bread 2 oz., in the form of toast; bread 10 oz.; butter 3 oz.; rice pudding made with milk and sugar, 2 oz. by weight; coffee 3½ oz.; tea 1½ oz.; sugar 2½ oz.; black currant jelly 8½ oz.; grapes ½ lb.; prune tea ½ pt.

Body-weight at the end of the twenty-four hours, 8 st. 7 lb. 4 oz. Temperature in mouth 98·8°.

Sixth twenty-four hours of the six-day walk.—Distance walked, 63 miles. Amount of urine passed, 1618·6 c.c (57 oz.); specific gravity, 1031·6; free acidity, reckoned as oxalic acid, ·63 gramme in 1000 c.c. (·27 grain in 1 oz.); turbid from copious deposit of lithates. Microscopic characters: Amorphous lithate of soda. Composition in 1000 parts:—

Water		942·58
Solid residue (dried at 240 °F.) ...		57·42
Incinerated residue ...	15·52	
Organic constituents—		
Urea	38·31	
Uric acid	·97	
Other organic matters ...	2·62	—— 41·90
Mineral constituents—		
Chlorine	5·52	
Sulphuric acid	1·10	
Phosphoric acid	2·72	
Soda	4·07	
Potash	2·42	
Lime	·25	
Magnesia	·09	
Less excess	·65	—— 15·52
		57·42

Total quantity of solids excreted during the twenty-four hours:—

Urea	63·950	grammes	(985·98 grains)
Uric acid	1·618	,,	(25·96 ,,)
Other organic matters	4·533	,,	(69·43 ,,)
Chlorine	9·228	,,	(142·41 ,,)
Sulphuric acid ...	2·007	,,	(30·86 ,,)
Phosphoric acid ...	4·533	,,	(69·43 ,,)
Soda	6·799	,,	(104·92 ,,)
Potash	4·047	,,	(62·34 ,,)
Lime	·421	,,	(6·48 ,,)
Magnesia	·162	,,	(2·47 ,,)

Food consumed: Cooked meat, 1 lb. 12 oz. (lean of chop, boiled chicken, and minced chicken); jelly, ½ pt.; milk, ½ pt.; oatmeal, 1 oz. in the form of gruel; bread, 8 oz.; butter, 2½ oz.; potatoes, 1 oz; baked custard pudding, 17 oz. by weight; coffee, 1½ oz.; tea, 1½ oz.; black currant jelly, 3 oz.

Body-weight, without clothes, at the end of the twenty-four hours, 8 st. 6 lb. 7 oz. Temperature in mouth, 99·6°.

EUCALYPTUS GLOBULUS IN PULMONARY GANGRENE.—Of all the drugs employed by Dr. Bucquoy (of Cochin Hospital, Paris) in pulmonary gangrene none, he asserts, have given him better results than eucalyptus globulus. He uses it in the form of an alcoholate—two grammes—(half a drachm) daily in a mixture of water, gum, orange-flower water, and syrup. Out of the various cases he has had under his care at Cochin, five ended in cure, whilst in all the others there was a favourable modification of the odour of the breadth, the sputa, and the violent cough, after carbolic acid had failed.

OBSERVATIONS ON THE CIRCULATION MADE ON MR. WESTON DURING HIS LATE 500-MILE WALK.

BY F. A. MAHOMED, M.D.,
PATHOLOGIST TO ST. MARY'S HOSPITAL.

DURING the last week Mr. Weston allowed me to make a series of observations on his circulation, while engaged in his 500-mile walk, and it is at his request that I now send them for publication.

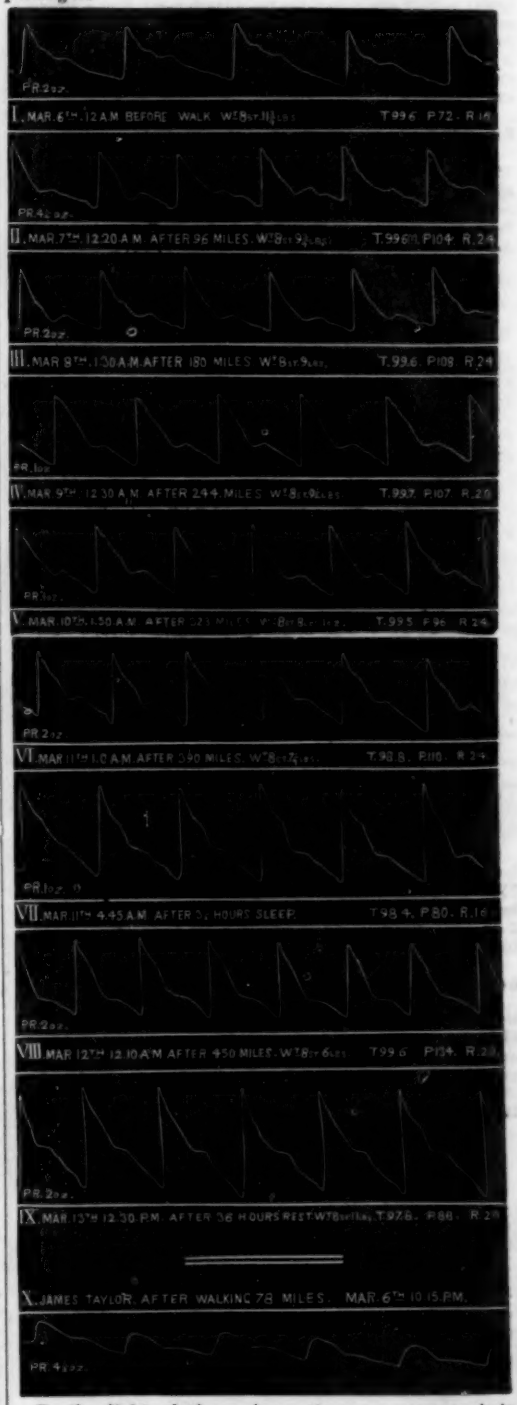
On several occasions I attempted to obtain simultaneous cardiographic and stethographic tracings, but without success, the heart's impulse being but indistinctly felt, and not having sufficient force to afford a tracing. In the accompanying plate, the sphygmographic tracings obtained are reproduced, together with a nightly record of the distance walked, weight, temperature, and frequency of pulse and respiratory movements.

I have elsewhere shown that exercise appears to produce two important and opposite effects on the circulation, according to the general condition of the person under observation. In persons out of condition and unaccustomed to it, exercise reduces the arterial tension and increases the temperature; carried to an extreme this condition may produce syncope from anæmia of the brain, which is robbed of its blood by the unduly increased requirements of the muscles, and sudden failure, by paralysis, of the action of the heart. On the other hand, it may increase the arterial tension. The cause for this increase is more obscure: it would appear to occur from impaired nutritive power in the tissues interfering with what has been called the chemico-vital capillary power, and thus causing capillary obstruction; or some might explain it, though I do not think so correctly, by contraction of the arterioles due to irritation of their vaso-motor nerves by an irritable and exhausted brain. Or, again, it may be produced from the action of the heart being excited to a degree above that required for the effectual circulation of the blood, the influx of blood into the vessels being in excess of the afflux by the capillaries, thus raising the arterial tension. This condition of increased arterial tension appears to have been present to a slight degree in the case of Mr. Weston, and more powerfully in one of his competitors, Taylor.

Variation of tension in this direction is accompanied by a reduction of the temperature. It increases the work required from the heart, and failure of that organ to meet the strain thrown upon it gives rise to dilatation. This is indicated by a number of symptoms which may be easily recognised; the chief ones being breathlessness, oppression at the præcordia, vertigo, coldness of the extremities, and reduction of temperature of the body generally; pallor and anxiety of the face, dilatation of the pupil, smallness and irregularity of the pulse, with a constantly full vessel, with irregularity and shallowness of the respiratory acts—a condition to which Taylor was reduced, and which is indicated by his pulse tracing (No. 10).

It will be seen from the tracings that Mr. Weston began with a perfectly normal pulse (No. 1), and that during the first two days the tension was somewhat reduced (Nos. 2 and 3). During the next three days the tension gradually rose, and attained its highest point on the fifth day of his walk (Nos. 4, 5, 6, and 7). The increased tension of the latter day is demonstrated by the prolongation of the tidal wave, and the height of the aortic notch from the base line of the tracing (Nos. 6 and 7). His temperature was reduced simultaneously with the increase of arterial pressure. On the sixth day he did but little work in the morning, and had a good mid-day sleep, which greatly refreshed him, and improved his general condition. Previous to this he suffered extremely from want of sleep. In the evening of the sixth his temperature was again raised, and his arterial tension reduced (No. 8). The next tracing (No. 9), was obtained on Monday, the 13th inst., after thirty-six hours' rest and good living. It shows a normal condition of the arterial tension with relaxed vessels, and represents a large soft pulse.

Mr. Weston presents no indications of arterial disease or hypertrophy of the heart. The heart-sounds were perfectly normal, except on the occasion of the increase of tension, when the second sound was accentuated and the first prolonged.


I. MAR. 6TH. 12 A.M. BEFORE WALK
II. MAR. 7TH. 12.20 A.M. AFTER 86 MILES.
III. MAR. 8TH. 1.30 A.M. AFTER 180 MILES
IV. MAR. 9TH. 12.30 A.M. AFTER 244 MILES
V. MAR. 10TH. 1.30 A.M. AFTER
VI. MAR. 11TH. 1.0 A.M. AFTER
VII. MAR. 11TH. 4.45 A.M. AFTER 3 HOURS SLEEP.
VIII. MAR. 12TH. 12.10 A.M. AFTER 450 MILES.
IX. MAR. 13TH. 12.30 P.M. AFTER 36 HOURS REST.
X. JAMES TAYLOR. AFTER WALKING 78 MILES. MAR. 6TH. 10.15 P.M.

By the light of these observations we may conclude that on those occasions, during his previous walks, when his temperature was reduced below normal, the arterial tension was coincidently increased.

THE LANCET.

LONDON: SATURDAY, MARCH 18, 1876.

IGNORANCE is bearing its natural fruit, trouble. The Council of the College of Surgeons so far pride themselves upon their ignorance of the obstetric branch of their profession that they deem it contamination to admit anyone skilled in it to a seat at their purely surgical board. But they have not on that account felt themselves disqualified to legislate on obstetric matters. The result, as might be expected, is a climax of confusion. To make the actual situation clear a short historical summary is necessary. Previously to 1868 the College was intensely surgical. It granted diplomas after examination in anatomy and surgery only. So strong was the faith in the comprehensive power of surgery that they sent forth any number of men armed with their authority to practise medicine and obstetrics, as well as surgery, without taking any further proof of fitness than may be supposed to reside in the signature to a schedule. In 1868 it struck them that some additional proof of skill in medicine should be required. Two examiners in Medicine were appointed, whose duty it was to test those candidates who did not bring evidence of having passed a satisfactory examination in Medicine elsewhere. They thus, by making medicine an integral part of their scheme, removed one serious defect. Having gone so far as to practically acknowledge that they had erred in assuming that surgery included and implied a knowledge of medicine, it might have occurred to them that the same logic of facts, the same process of reasoning, irresistibly dictated the same course of action in respect to obstetrics. But no; either obstetrics, which only dealt with those inferior creatures, women and children, required no particular education, or it came by intuition to those who had learned a little surgery when they wanted it. So obstetrics was left out in the cold. There was a special licence in obstetrics which men intending to practise in this department might take or not as they pleased. Numbers found it convenient to practise without passing this special examination. And the public, not always suspecting what the member's diploma of the College meant, accepted this diploma as evidence of fitness to practise obstetrics, as well as surgery and medicine. It never seems to have occurred to the Council of the College that they ought, as a simple matter of justice to the public, to have plainly set forth in the body of their diplomas the precise value of them, as evidence of fitness to practise as tested by examination. For example, a clause should be appended to this effect: "This diploma is not to be taken as evidence of fitness to practise obstetrics." The Council can hardly find justification in the fact that in 1852 they instituted this special obstetric licence. If they could, under a bye-law, make medicine an integral part of their examination for membership, they could have done the same for obstetrics, and thus have done what the College of Physicians has done with so much honour to itself and usefulness to the public. But by this halting, fragmentary policy, the Council of the College of Surgeons find themselves in the most awkward dilemma. They are now compelled, they say, to administer this unfortunate Charter, which enables them to examine "persons" for the obstetric licence, to the very letter. Counsel, who rule not alone law but medicine, declare that "persons" in this Charter include women; that not only is the College enabled to admit women, but that it can be compelled to admit them; that it is only necessary for "persons" to bring proof of having pursued such a curriculum of education as will qualify candidates to be examined for the membership. One difference being that *members must be men*. That is, only a man can be a surgeon; but a woman may practise obstetrics. Why? The explanation may be drawn from the letter of Mrs. ANDERSON, quoted by the President of the Metropolitan Branch of the British Medical Association held on the 3rd inst. "Dr. ACLAND suggests that a special diploma should be superadded to those already in existence, and that it should be given to those women who do not desire to have the same education as men, but who do desire to have a public recognition that they are fit to practise in the diseases of women and children." "It would have been useful if Dr. ACLAND had explained what part of the education given to medical students could be omitted with advantage in the case of those who intend to practise only among women and children. Is there less need for a knowledge of physiology or anatomy or any other branch of medical knowledge because the patient happens to be a woman or a child?" It is not surprising that this most pertinent question should come from a woman. Can anything more injurious to womankind be uttered, than the proposition thus unanswerably repudiated by Mrs. ANDERSON? And yet Dr. ACLAND's position is exactly that now taken up by the Council of the College of Surgeons. They accept the lawyers' interpretation of their Charters; they do not seek to amend those Charters; they submit humbly to the ignominy attached to carrying out a policy insulting to women, injurious to medical science, offensive to the mass of the profession, and which cannot fail to prove detrimental to the public interest.

It may be urged in extenuation that the licentiates in midwifery would be restricted to obstetric practice. Upon this point counsel declare that these licentiates can only recover in a court of law charges for work of a strictly obstetric nature. We do not see that this is of much importance. Lawyers are to decide what is obstetric work and what is not. And no doubt they will do it to their own satisfaction; but how far legal decisions will agree with fact and science is another question. We should like to hear how the President of the College of Surgeons would define medical syphilis, surgical syphilis, and obstetric syphilis; how he would assist the legal mind in assigning limits to the obstetric "person." The diagnosis of pregnancy is, *primâ facie*, purely obstetrical; but to diagnose ovarian tumour or an abdominal tumour from the gravid uterus, demands an extensive knowledge of medicine and surgery. Indeed, start where we may, at every step medicine, surgery, and obstetrics will overlap, to the confusion of surgical or medical specialists, lawyers, and framers of charters.

The profession will be curious to see how the Council of the College will justify the position they have taken up. They may entertain an honest conviction that the Charter which is so obnoxious to the profession is a just and useful Charter, and that they ought, on the merits of the case, and not simply on legal compulsion, to carry it out. Or they may believe that the Charter is bad and mischievous. In the latter case, the course to be taken seems clear enough to plain men. Surely they ought not to submit to the ignominy of carrying out a measure which they think is bad. In either case it seems hard that they should call upon their Examiners in Midwifery, who never contemplated such a duty, to be the instruments of their policy.

They must not be surprised if those who represent obstetric medicine decline to assist in the manufacture of fragmentary diplomas. The Council of the Obstetrical Society and a general meeting of the Metropolitan Branch of the British Medical Association have already expressed in unmistakable terms a judgment which will be universally endorsed by the profession. One of their examiners has already resigned. They have met with more than one repulse in the attempt to supply his place. Why not acknowledge their error, and withdraw from a position which cannot be held with honour?

WHEN Lord JOHN RUSSELL introduced, and carried through Parliament, his Bill for the Civil Registration of Marriages, Births, and Deaths, in 1836, with a view to redress certain grievances of dissenters, and to secure national uniformity in these registers, the importance of the measure as the foundation of a system of vital statistics was scarcely alluded to. The preamble to the Bill did not even mention this as one of the grounds which made the measure desirable. The Bill, as it left the Commons, did not contain any provision for the registration of the cause of death, this clause being, if we mistake not, inserted by an amendment in the Lords, in a great measure owing to the urgent representations of the British Association, of Sir JAMES CLARK, and a few others, who, deeply interested in all matters appertaining to the public health, foresaw how the new Act might be turned to valuable account. The experience of forty years' civil registration has fully proved its value from a legal aspect, while the leverage it has afforded for the promotion of sanitary reform must have surpassed the most sanguine expectations entertained by the small minority who appreciated its importance from this point of view.

The national system of vital statistics, which dates from the commencement of civil registration, was due to the fortunate appointment of Dr. WILLIAM FARR to superintend the compilation and publication of statistics soon after the Act came into operation. For nearly forty years Dr. FARR has laboured, in the Weekly, Quarterly, and Annual Reports of the Registrar-General, not only to improve the statistics themselves, but to render them intelligible to the public, and to point their moral. England has reason to be proud of her system of sanitary statistics, not only on account of the influence which they have exercised upon public opinion in health matters at home, but because they have been in great measure adopted as a model by the larger part of the civilised world. Sanitary statistics and sanitary progress have grown together in England, and we may now observe the same process at work in the four quarters of the world. Even the strongholds of plague and cholera in the East are being attacked, and thus the nations of the West will have less cause to fear a recurrence of these visitations.

The Registrar-General has just published a Supplemental Report upon the mortality statistics of the third decade of civil registration—the ten years 1861–70. As certain of the results for the two preceding decades are also brought into account, the volume, with its exhaustive report by Dr. FARR, presents an invaluable record of the public health of the nation during the thirty years 1841 to 1870.

At first sight there is something discouraging in the fact that the average annual death-rate in England was equal to 22 per 1000 in each of these three decades. The influence of density of population upon mortality, however, is so marked, and is now so well understood, that when we remember that the population of England and Wales during the thirty years 1841–71 showed an increase of little short of seven millions, nearly the whole of which had aggregated to town centres, there is considerable cause for satisfaction in that this aggregation has taken place without any increase in the average national death-rate. Undoubted sanitary progress and declining death-rates in many parts of the country have not been more than counterbalanced by declining health and increased death-rates in the mining or manufacturing districts of Yorkshire, South Wales, and parts of Lancashire. If a more perfect sanitary organisation had controlled and protected these new urban aggregations from the natural results of overcrowding, uninhabitable dwellings, and impure air and water, our national death-rate in the more recent decade would have shown a decline. Towns, as a rule, are unhealthy compared with rural districts, but the very variation in the death-rates of towns shows that a high death-rate is not a necessary evil in urban populations. Some of the English town districts exhibit the most remarkable evidence of improved health in the thirty years under notice. In Portsmouth the death-rate in the three decades has been 25, 23, and 21 per 1000 respectively; in Wolverhampton 27, 28, and 24; and in Coventry 27, 25, and 21.

Dr. FARR has continually urged in the Registrar-General's Reports that any excess in a death-rate over 17 per 1000 may be taken to represent the result of insanitary condition. Although it may be long before the death-rates of our large towns are reduced to this standard, the fact remains that during the ten years 1861–70 the average annual death-rate in fifty-three of the healthiest districts of England and Wales, having a mean population of 837,179, was as low as 16·75 per 1000. The rate of mortality, moreover, is somewhat overstated in these healthy districts on account of the high proportion of elderly persons in the population, which is not compensated for by the low proportion of children. This low death-rate during a period of ten years, in a population little short of a million, proves that a death-rate of 17 per 1000 is no mere chimerical standard. Dr. FARR examines the ages and causes of the excessive number of deaths in England and Wales generally, and in the more unhealthy districts. It is shown conclusively that the largest excess occurs in the deaths of children, and from zymotic causes. Of an equal number of children born in the healthy districts, 7 per cent. die of small-pox, measles, scarlet fever, whooping-

cough, or fever; the average proportion in England is 10 per cent., and in Liverpool 18 per cent. Looked at in a different way, of 1000 children born in the healthy districts, 825 live to be five years old, whereas only 540 of 1000 born in Liverpool survive to that age. This marked difference in the number of survivors continues throughout a generation. At fifty-five years of age 534 of the 1000 born in the healthy districts are still alive, while the Liverpool 1000 has dwindled to 184; at eighty-five years of age 70 survive in the healthy districts, against but 7 in Liverpool.

The results of some ingenious and interesting calculations are presented to us by Dr. FARR, as to the effect upon the duration of life which would follow the stamping out of certain diseases. For instance, we are told that if no males were to die of any zymotic disease—the class of disease depending more than any other upon insanitary condition,—and if they were to remain subject to the same rate of mortality from all other diseases, the mean duration of male life would be raised from forty to forty-seven years. The suppression of phthisis in the same way would raise the mean duration of life by three years. Dr. FARR points out that it has been urged by anti-vaccinators that vaccination has increased the rates of mortality from other diseases. The reduction of the deaths from small-pox naturally spares an increased number of survivors to be attacked by other diseases; but this proves nothing if the survivors only die in the same proportion from other diseases as they did in the times when small-pox was so fatal. The assertion that the mild form of disease produced by vaccination renders the subject "more susceptible of other diseases, derives no support from analogy."

Based in great measure upon the sickness statistics of the army, the police, and of friendly societies, Dr. FARR estimates that in the United Kingdom, with its 700,000 annual deaths, there are about two millions of persons constantly suffering from such sickness as requires medical relief, and incapacitates them from active duties. This number would give a hundred patients each to 14,000 hospitals and 6000 dispensaries. While there can be no doubt as to the value of well-organised sickness returns, which we do not possess, the following statement of Dr. FARR increases, for sanitary purposes, the value of well-digested mortality statistics, such as are issued from the Registrar-General's Department: "Deaths and sickness within certain limits rise and fall together; thus, if the constantly severely sick in the population could be reduced from 1,400,000 to 1,050,000, the deaths would be reduced from 700,000 to 525,000, or the annual mortality would be reduced to the desired rate of 17 in 1000."

Civil hygiene, which Dr. FARR says was at its lowest ebb in England about 1830, was then more cultivated in Paris, where the course of hygiene at the University, by ANDRAL was attended by more than a thousand students. Then hygiene was not taught at a single London school. In recent years, however, the scientific study of public health is taking its proper position, and as county and municipal authorities gradually learn that it will be the truest economy to pay such salaries to their health officers as will command the services of really able men in the profession, the demand for such men will, Dr. FARR confidently anticipates, lead to hygiene being efficiently taught in our medical schools. It is "natural to expect that State medicine—public hygiene—will be most advantageously cultivated by men who devote their whole time to its practice."

There is no reason to think that the amount of medical attendance in this country is more deficient than in other civilised countries, yet, as Dr. FARR points out, while "in the army there is one surgeon to every 202 men, there is in the general population only one medical practitioner to every 1276 men, women, and children living." The appointment of scientifically trained health officers will tend to supply this deficiency in the way it is most needed. The public are too prone to postpone calling in the doctor, the dentist, and the lawyer until they get into difficulties. A public belief in what Dr. FARR calls private hygiene, as applicable to people in health, would do more to reduce sickness and prolong life than the highest skill in the treatment of disease. In public hygiene the efficient medical officer of health does not wait for an outbreak of disease before he gets to work; so in private hygiene, professional advice as to the maintenance of health must be infinitely more valuable than advice given after illness has set in. Private hygiene, in its relation to the air we breathe, our food and drink, our occupations, our rest and exercise, our sleep, our houses, the temperature of our rooms, has been and is too much disregarded, so long as we continue in moderate health. We are, in fact, improvident of our health, hence much of our disease.

This decennial Supplement of the Registrar-General, and the introductory letter with accompanying tables by Dr. FARR, are indeed a perfect mine of wealth for those who wish to study sanitary statistics as the exponent of the health or disease of a community. To officers of health the volume will be invaluable, and we hope that some arrangement will be made by the Local Government Board by which copies of the work may be supplied to them. What the Registrar-General and Dr. FARR have done for the vital statistics of England, the medical officers of health of the larger districts should do for the areas under their control, and this Supplemental Report contains just the information which will enable them to undertake it.

THE Committee of Council of the British Medical Association, after deciding to pay the reluctant members of the medical profession at Brighton a visit next August, attempted, in a resolution passed on the 29th ult., to snub the recalcitrants for publicly declining to accept the honour. The Committee of Council, in the resolution referred to, observed that, "whilst regretting the course adopted by certain members of the profession in Brighton, they still believe that a successful meeting will be held there, and will gladly receive the co-operation of those members of the profession in Brighton who are ready to assist in making the required arrangements for the annual meeting." What kind of co-operation the Committee are likely to receive may be judged from the facts set forth in a letter published in our columns last week from Dr. KEBBELL, the chairman of the Brighton meeting. In reply to a circular signed by the three secretaries appointed by the Committee of Council, and sent to every qualified practitioner in Brighton, thirty-one medical men assembled at the Pavilion on the 22nd ult.,

to consider and report to the Arrangement Committee in London on subjects in the printed agenda. Of these, twenty-five voted for Dr. WITHERS MOORE'S amendment, which was to the effect that as the Committee of Council, in appointing the readers of the addresses for the next annual meeting, had ignored the claims of the profession in Brighton, it was not expedient, in the interests of the Association, for the medical men of that town to take any official part in the forthcoming annual meeting. Against this only one person (exclusive of the secretaries) voted. There can therefore be little doubt as to the feelings with which the practitioners of Brighton regard the act of the Committee of Council. Among the large number of highly esteemed and well-reputed medical practitioners of Brighton, none could, in the opinion of the Committee, be found competent to read an address in medicine or surgery or obstetrics—at least, none were asked to undertake to do so. When we consider the influence and high professional status of many of the Brighton practitioners, and the large opportunities for clinical experience which their valuable hospital, containing over one hundred and fifty beds, affords, it is impossible to regard the action of the Committee of Council as anything but a deliberate slight. It is vain for the inspired organ of the Council to state that it is not the custom of the Association to select more than one of the readers of addresses from the members of the local branch. When the Association last met at Brighton, both the address in Medicine and in Surgery were read by local practitioners; and why, it may be asked, are their worthy successors ignored? It should not, however, be forgotten that although the ostensible ground of complaint is now the subject of appointment of the readers of the addresses, probably the real grievance is of much longer standing, and a very strong feeling exists that the affair was in the first instance got up with unreasonable haste and at a time when many of the leading medical men were absent. It was well known that at the Edinburgh meeting the memorial which had been got up inviting the Association to hold its meeting at Brighton was by no means unanimously approved. Indeed, at the second general meeting an amendment was proposed and seconded that the meeting should not be held at Brighton, for the very reason that the invitation was not unanimous.

It is by no means a novel or unusual circumstance for the Committee of Council to find a difficulty in engaging a place for their annual holiday. A very determined opposition was made by many of the most influential practitioners in Edinburgh against the last meeting being held in that city, and it was only by the application of the judicious system of conciliation that a gloss was put over the bitterness which the high-handed action of the Committee had provoked. After this the Committee of Council, casting about for another locality, were, we believe, told to go to Bath, but that city repudiated the honour of receiving them. At Liverpool they would be welcome, but that town was not liked by those who rule the destinies of the Association. Brighton alone remained, and to Brighton they were determined to go, even if they had to entertain themselves. Nor were the chances of a fairly successful meeting at Brighton hopeless until the Committee of Council, by appointing outsiders and strangers to read the addresses, sealed the fate of the next meeting. A really amicable and satisfactory arrangement is now felt to be impossible, and the Committee of Council would therefore do well to make the serious illness of Sir J. CORDY BURROWS a reason for accepting for the nonce the less fashionable, but by no means uninteresting, town of Liverpool. If they persist in their determination to go to Brighton, they will find at the best a cold and half-hearted reception. The wound that has been inflicted on the reputation of the medical men in Brighton is too deep to be readily healed.

THE debate on Syphilis at the Pathological Society has nearly reached its conclusion, if, as is understood, it is to be finished at the next meeting of the Society. There has, we believe, been a suggestion that it should be prolonged to another meeting, but on various grounds such a course is to be deprecated. We may, then, assume that the most important of the facts and arguments in favour of, or opposed to, the views advocated by Mr. HUTCHINSON in his opening thesis have already been adduced, and that the remainder of the time will be mainly occupied by the President's summing up and Mr. HUTCHINSON'S reply. For the present we reserve our opinion on the general results of the debate, lest we should anticipate either of these speeches. Thus far, the debate has not been without interest and value in any of its stages, although it may not have answered all the expectations formed with regard to it. But it is a matter for regret, that so small a number of those who, from their exceptional advantages or long standing interest in and work at this subject, are entitled to be heard, should have had the opportunity of expressing their views or stating their experience. This must be in part ascribed to the inordinate length of some of the speeches, which might reasonably have been curtailed. We would not for a moment imply that any of the speeches already delivered, some of which have been marked by great ability, have been unimportant, but unless they are to be regarded as representative of all the schools of thought, it is obvious that some views held by a large number must have been unexpressed, simply owing to want of time.

At present the points in Mr. HUTCHINSON'S address which have received most attention have been those bearing on the question of how far syphilis is to be considered as a blood disease, and especially in what light the presence or absence of symmetry in its secondary or tertiary manifestations is to be regarded; and whether tertiary lesions are to be placed amongst sequelæ. It is not surprising, perhaps, that points so distinctly raised, and to which so much importance was ascribed by Mr. HUTCHINSON, and which at the same time lend themselves so readily to speculation and argument, should have been largely dwelt upon, especially as Sir JAMES PAGET led the way in this course. The view that syphilis is to be classed amongst the acute specific fevers seems to meet with general acceptance, and even when a certain divergence of opinion from this view has been implied, it has, as a rule, been explicitly disavowed at a later period. Certain objections have been raised, and difficulties pointed out in explaining some of the peculiarities of the disease on this hypothesis, but they have been re-

garded merely as points requiring elucidation. Thus Dr. BROADBENT, many of whose facts would seem strongly opposed to this analogy, expressly stated that he agreed in the belief, and was only anxious that it should be made clearer. Dr. MOXON, too, spoke of syphilis as a "fever diluted with time."

Sir WILLIAM JENNER, in a few remarks, which for pith and brevity, combined with clearness of expression, have not been equalled in the course of the discussion, put some of the arguments in a new light. He pointed out that certain acute specific fevers—e.g., typhoid fever—are not symmetrical in their manifestations; hence want of symmetry does not exclude from the class. Moreover, some symmetrical affections—e.g., psoriasis—may be produced by local irritation; hence symmetry does not prove blood disease. This latter argument is doubtless open to the objection that in a healthy person psoriasis would not occur from local irritation alone. And, lastly, that the sequelæ of some acute specifics are peculiar and specific in their nature—e.g., the paralytic sequelæ of diphtheria; hence specificity of sequelæ would not be peculiar to syphilis. Taken together, these arguments would go far to show that these points are of little importance in deciding on the relative position of syphilis. And, indeed, Sir W. JENNER seems to hold, although he did not clearly express, a somewhat different view as to its essential nature, and in its heredity he sees a proof that it may be conveyed by the germ or sperm-cell, and hence is to be regarded as a constitutional affection.

Dr. BROADBENT, who recommenced the discussion in an able and elaborate, though somewhat too prolonged speech, brought forward some very important points, on only one or two of which can we touch. He pointed out that the definite course and duration of acute specific fevers were not paralleled in syphilis, and that the sequelæ of acute specifics were rarely themselves of specific character, instancing the parotid bubo of typhus and the aural catarrh of measles. Another difficulty in regarding tertiaries as sequelæ he found in the fact that a parent with tertiary syphilis may have a child who shall have the secondary form. Dr. BROADBENT mentioned another fact which will scarcely pass without question—viz., that a woman may acquire syphilis from a fœtus, and that the symptoms may be aggravated by a fresh dose of poison in subsequent pregnancies. This, if true, will go far to upset our present faiths on the subject.

Dr. BUZZARD'S speech, which was suggestive, though, perhaps, too condensed, owing to want of time, was a valuable contribution to the question of the occurrence of nervous disorders in syphilis; but his conclusions, as well as those of Dr. BROADBENT, were in favour of Mr. HUTCHINSON'S belief as to the rarity of nervous symptoms in hereditary syphilis, and were inconclusive as to their occurrence in the secondary stage. Dr. BUZZARD'S suggestion, although not a novel one, as to the relation of syphilitic new growths with the lymphatic system, deserves attention, and will, we trust, receive further consideration.

Dr. MOXON'S speech was no doubt regarded by many as the event of the evening. The faculty which he possesses in so high a degree, of clothing dry facts and theories in a style which combines instruction with amusement, always ensures him an attentive and appreciative audience. Nor must it be inferred that we would desire it to be otherwise, for his suggestions were at once witty and clever, amusing and serious. Were it not, indeed, for a love of paradox for its own sake, and a sort of dialectic delight in placing his opponent upon the horns of a dilemma, which lead him at times into reasoning of too sophistical a nature, we should consider most of his arguments, as some of them certainly are, of great value. It may be added that his views were more decidedly divergent from those of Mr. HUTCHINSON than were those of almost any previous speaker except Mr. DE MÉRIC. The symmetry claimed by Mr. HUTCHINSON for the earlier symptoms were ascribed by Dr. MOXON to the fallacies involved in the generalisation of the eruption upon a symmetrical body, and the implication of the whole of one particular tissue, such as cornea, where it is equally distributed. On the other hand, Dr. MOXON claimed a symmetry for tertiary lesions which is certainly not generally allowed, and the claim, founded as it was on one or two chance instances, was probably introduced merely as an *ad captandum* argument. By far the most valuable suggestion in his original speech was that of the tendency to affection by febrile diseases of as yet unaffected individuals and tissues. Regarding syphilis as an acute specific, "drawn out" and extended in all its periods, he pointed out how, just as the ravages of small-pox and measles on their first introduction amongst savage races, are of far greater severity than in races long accustomed to them, so does syphilis affect new individuals and probably also newly-formed portions of tissue with especial intensity. As to the tissues, the hypothesis scarcely admits of proof, but it certainly has apparently a striking bearing on the severity of congenital syphilis.

It will be seen that on two of the points raised by Mr. HUTCHINSON very little light has as yet been thrown—viz., the internal pathology of the secondary stage of acquired syphilis, and the pathology of the late periods of inherited syphilis; nor have there been many *facts* as to the probability of gummata being regrowths in residuary formations, so that at present nearly three-fourths of the questions which he raised have received no answer. Yet we cannot regard the discussion, even so far, as valueless; and if it serves to show the large gaps in our knowledge, and the necessity of improving the opportunities for observation upon certain points, it will not have been without some beneficial result. Mr. HUTCHINSON'S reply will doubtless be as able as his opening address, but, unless some fresh facts be adduced, a slight modification of his theory will meet nearly all the arguments with which it has been assailed.

IT does not speak well for the intelligence of the public that the stamp duty on patent medicines during the year ending March 31st, 1875, yielded an increase of £13,849 over the produce of the previous year. It is scarcely credible that the passion for consuming unknown quantities of unknown drugs should be so strong as this thriving trade in nostrums indicates. There must surely be a class of sufferers or hypochondriacs who derive a special pleasure from the practice of playing with poisons. Probably the pretence of mystery which hangs around these covertly compounded pills and potions contributes a special charm to their consump-

tion. It matters nothing that the affectation of secrecy is in most instances purely deceptive. We are not, however, greatly interested to expose the folly of a habit which stands confessed in its wantonness. If people choose to physic themselves with medicines, the very names of which are intentionally concealed from them for a commercial purpose, and with the nature and effects of which they are wholly unacquainted, it may be our duty to protest, but it can scarcely be expected we should do more than raise the voice of warning. The question we are especially anxious to propose is whether the growing practice of prescribing medicines bearing the names of physicians or chemists is not doing something to encourage the use of remedies also bearing the names of their supposed discoverers or compounders, by the general public? When a patient and his friends find the prescription written by some physician of repute containing as its principal, perhaps sole, ingredient Somebody's syrup, or solution, or extract, is it not natural they should suppose the recourse to proprietary medicines has the sanction of the profession—more particularly as nearly all the "cure-alls" and "heal-alls" of the day are, or, what is quite as much to the purpose, are said to be, "recommended by the faculty"? The practice of naming special compounds after the medical men who first proposed their use, in the form adopted, is carried to a great extent on the Continent, but there was until recently a hope that the objectionable custom was falling into disuse in this country. We regret to notice that it has of late received new impetus; and that many prescriptions now flying about could not possibly be made up by any chemist unacquainted with the formulæ of certain distinguished practitioners. This is much to be regretted; and while calling attention to what we conceive to be the very discreditable and growing practice of using patent medicines in families, we think it only just to ask whether the profession is not itself, to some extent, fostering the faith in nostrums by prescribing drugs bearing private names, either to save trouble, or, as the phrase goes, "to insure accuracy in compounding"?

Annotations.

"Ne quid nimis."

PRESCRIBING CHEMISTS.

THE recent words of Baron Bramwell, and the verdict of the jury, in the case of the Master, Wardens, and Society of Apothecaries of the City of London *v.* Nottingham, have not unnaturally struck terror into the minds of chemists who are conscious of overstepping the bounds of reason and propriety in prescribing for disease of a serious character. His Lordship's words possessed the excellent quality of plainness. "If a man entered a chemist's shop and asked for something to cure a bad headache, and the chemist gave him a draught, without doubt the chemist would technically infringe the terms of the Apothecaries Act; but it would be very unreasonable if the Apothecaries' Company were to interfere in such a case." The jury returned a verdict for the plaintiff, and his Lordship refused to give leave to move. We are not prepared to say that it would be right in the Apothecaries' Company, or rather the Medical Defence Association, which is entitled to the credit of moving the inert Corporation of Blackfriars, to prosecute every chemist who could be convicted of prescribing. To the credit of the Council of the Pharmaceutical Society, it seems to perceive—judging from a report of a recent meeting—that the Association distinguishes between chemists who try to restrict their business within its own reasonable limits, and chemists who audaciously ape the medical practitioner by every device short of calling themselves doctors. The same credit must be accorded to the *Pharmaceutical Journal*, which says it has always endeavoured to urge the desirability of not giving medical practitioners reasonable ground for complaint that their legitimate functions were interfered with by counter-prescribing. It is to be regretted that it has not had more success in this respect. For it is notorious that even respectable druggists prescribe and go on prescribing for grave cases altogether beyond their knowledge and competence. Let us hope that Mr. Nottingham's fate will be a warning to all who abuse the chemist's business, which admits of splendid development yet in the way of adaptation and subordination to the medical wants of the public. Mr. Nottingham had previously been prosecuted successfully, after which he entered into an alliance with Mr. C. W. Waylen, a duly qualified surgeon and apothecary. But though Mr. Waylen did the chief portion of the visiting, Mr. Nottingham attended the patients who came to the shop. But Mr. Waylen did not save his ally from the consequences of breaking the law.

We cannot forbear a word of almost indignation at the inertness of the Apothecaries' Company, which has allowed chemists to act as they pleased until they have come to regard themselves as in the same relation to medical practitioners now as apothecaries used to be to physicians. But for the Medical Defence Association undertaking to do the Society's work—the Society claiming the fine where the prosecution succeeds—we should have had no vindication of the law. No wonder that the profession thinks so lightly of medical corporations, which do nothing but take money of the members of the profession, and leave them to do their work.

HUNTINGDON COUNTY HOSPITAL.

THE conduct of the medical staff of the Huntingdon County Hospital, at the time of the Abbots Ripton collision, was the subject of favourable comment on the part not only of professional journals, but of the public press throughout the country. The promptness with which the hospital was prepared for the reception of the injured, and the readiness with which each officer performed the work that naturally fell to him, without confusion or dispute, showed how excellent was the feeling that existed between the different members of the staff, and the entire absence of professional jealousies which, on occasions like the late catastrophe, too often find vent, and mar the general service. At Huntingdon the work was done in a quiet, orderly, and effective manner, and we felt gratified that the profession at Huntingdon had earned the thanks of the country, so justly expressed in the complimentary notices of the public press. We regret, however, to find that their labours have not been appreciated in their own district, and occasion has been taken to offer them collectively a grave public affront. The committee of the hospital, without the consent or full knowledge of the medical staff, at a recent meeting of the Board, proposed that an additional honorary medical officer should be added, and immediately proceeded to appoint a gentleman to the post thus created. Two reasons were urged for making this appointment. First, the gentleman's friends declared they would withdraw their support from the hospital if the appointment was not made; and secondly, it was urged that all medical men in the town should have the right of belonging to the staff. We can admit neither

of these pleas. No body of gentlemen ought, from consideration of expediency, to ignore the feelings of efficient public servants who are joined with them in working for the public good, and force on them a colleague in opposition to their wishes. Nor can we approve of a system which would throw the doors and practice of our county hospitals open to every practitioner who may chance to settle in the town, and would be glad of the status given by the title of surgeon to the county hospital. To secure really good men for our hospital appointments, the posts must be made to confer some special distinction, and it will be an evil day for a town when its best surgeons feel that a post at the hospital is no longer a thing to be coveted as a reward for hard work, honourable conduct, and professional ability. In the present instance the feelings and wishes of the staff have not only not been consulted, but their expressed opinion on this matter has been disregarded, which makes the matter extremely serious. They ought at once to lay a remonstrance before the subscribers of the charity, and, if they fail, we fear there is no option for them but a general resignation, following the example set in a like case by the medical staff of the Soho Hospital for Diseases of Women. As for the gentleman whose election has been the cause of this disturbance, we venture to express a decided opinion that he would best consult his own dignity and uphold the honour of our profession if he were to withdraw from the position in which he has been placed.

THE DISPOSAL OF THE DEAD.

THE public is much to be congratulated that Dr. Farr is not only a man of immense capabilities for work and for the scientific handling of masses of accumulated facts, but that he is also an eloquent writer of pure English. Indeed, we know of no one who is capable of putting dry subjects before the public in so attractive a form as Dr. William Farr. Appended to his recently issued Report is an article on the Disposal of the Dead, in which he reviews the various opinions on the subject which have been put forward by Sir Henry Thompson, Mr. Seymour Haden, and Mr. Holland. Dr. Farr deals first with the historical side of the question, and shows that, even if we were to adopt the practice of cremation, we should only be returning to a custom which Tacitus states to have been common among the German nations. On the question of economy Dr. Farr admits that cremation would entail a saving of land and time, but he points out that the great expense of burial as at present carried out is not so much due to the inherent necessities of the practice as to the barbarous and ostentatious customs with which we have surrounded it. The mere placing a body in the earth cannot, or rather need not, be an expensive process in itself, but the accompaniments of polished oak, crape, silk, plumes, horses, mutes, funeral baked meats, and "star-pointing pyramids" have made it so. Cremation, too, is capable of being made quite as burdensome to the pockets of the survivors; and Dr. Farr reminds us that the Romans showed great extravagance in their funeral rites, and that Nero lavished on the funeral of Poppæa as much incense as Arabia could produce in a year. The great advantage of cremation over inhumation lies in the fact that by the former process all disease germs must be utterly and irrevocably destroyed, and that for those dying of cholera, plague, small-pox, or other infectious diseases it is certainly the best mode of disposal. There is no need, however, for anything like compulsion in this matter, and cremation and inhumation may well be allowed to go on side by side. "Habits," he says, "change slowly, and if trials be made experience will decide. Neither of the systems, when once in use, will excite in common minds more repugnance than nature, desiring her creatures to love life, has thrown over the contemplation of dissolution. Some will prefer a house of rest in the earth; others a home in the sky. It is easily conceivable that a woman of refined mind might choose cremation, to escape what she dreads of worms, mould, eremacausis, putrefaction, or any kind of profanation. . . . The day will probably soon come when the several municipalities and sanitary authorities may, after due inquiry, and on equitable terms, relieve the cemeteries and yards of their office, and lay down such wise regulations as may secure the decorous, safe inhumation or cremation of the seven hundred thousand bodies that fall victims to death annually in the United Kingdom."

WESTON'S LAST FEAT.

MR. WESTON has performed, not the feat which he proposed to himself, but another which, we think, more remarkable. He has walked 450 miles in six days, with a sprained, painful, and considerably distended knee-joint in the middle days of the period, which we take to be a greater act of endurance and determination than to have walked fifty miles more with both legs perfectly sound. This praise is the more justified, as Mr. Weston was at the outset very insufficiently recovered from a feverish cold which confined him to the house for two days at Brighton. While there his night temperature was, on two nights of the six, 100° Fahr., and his weight at the end of the six days, notwithstanding almost complete rest, was only 2 lb. more than at the beginning—namely, 9 st. 2 lb. 8 oz. In other columns we are able to give the results of the most painstaking and laborious investigations of Dr. Pavy and his assistants, made especially with a view to determine the physiological questions which arise in connexion with such muscular exertion as is implied in Mr. Weston's feats. These investigations make a most valuable contribution to similar ones by Fick, Wislicenus, Parkes, Flint, and others. In the very nature of the case they are not so strict in all their conditions as those of Parkes and others. But they are as strict as the circumstances admit of, and help to determine approximately some important points in physiology. We are also able to give the careful series of sphygmographic tracings taken by Dr. Mahomed. A writer in a medical contemporary last week, as an excuse for the absence of careful observations of his own, made some remarks on the vitiating effect on Dr. Pavy's observations of a practice of Mr. Weston's of taking coca-leaves, the tendency of which, according to him, was to check the elimination of urea. It did not seem to strike him that taking such a plant, so far from vitiating the experiments, could only give additional significance to the enormous elimination of urea which has been observed in all Dr. Pavy's analyses. But there is one other reason why the writer in question should have been less hasty in making any remarks disparaging experiments which were being made at great trouble on the part of Dr. Pavy, whose labours are purely scientific—viz., that the remarks were unfounded in fact. Mr. Weston, since his first walk, has not taken the coca-leaves. His letter to us on this subject will be found elsewhere.

We have never justified these walks. They seem to us not to admit of defence from a practical or physiological point of view. But there is this to be said in Mr. Weston's favour: he shows the utmost willingness to be used as a means of determining what human muscles can do, and at what cost of damage to themselves this can be accomplished. It would be wrong not to point out how unique are Mr. Weston's powers. Finally, though there was something at times painful in the exhibition last week at the Agricultural Hall, there was nothing coarse, unless in

the selfish smoking of the audience, which so incommodes the pedestrian. On the contrary, it was an exhibition of pluck and determination unprecedented. Sometimes human nature would assert itself, and the walker almost sleep as he walked. But the sense of illness at the beginning, the demand for sleep, the swollen knee-joint, and, at the last, the sense of mortification at not doing what had been proposed, were all kept in abeyance, and at 11 o'clock on Saturday night the pace was that of a man with whom few of us would like to walk far.

THE EDINBURGH COLLEGE OF PHYSICIANS AND THE TITLE OF DOCTOR.

WE cannot give much more space to the painful controversy between the authorities of this College on the one hand and its licentiates on the other. Unfortunately, their statements are flatly contradictory. Dr. Cumming, fortified by a letter from the present honorary secretary of the College, himself one of its examiners, in THE LANCET of Feb. 19, says:—

"The secretaries who have conducted the official correspondence of the Edinburgh College with its licentiates assure me *that in their communications with them, after the licence has been granted, they have invariably avoided using the title of 'Doctor'*; and that in answer to inquiries they have always written that that title belonged legally only to those who hold the degree of M.D. from a University."

The italics are ours. Our readers have seen the letters of numerous gentlemen contradicting the statement of Dr. Cumming. We subjoin an actual letter to Dr. Plomley, of Maidstone, from Dr. Haldane, Dr. Plomley not being then, as he is now, a graduate of Brussels:—

"Royal College of Physicians, Edinburgh, 19th December, 1866.

"Dear Sir,—In reply to your letter, I beg to say that only University graduates have a right to the title of 'Doctor.' But it seems to have been decided by the courtesy of the profession and the public that licentiates of Colleges of Physicians may be so addressed and may so style themselves.—I am, dear Sir, yours truly,

"Dr. Plomley." "D. R. HALDANE.

Here is an end of controversy. Colleges have short memories. But *litera scripta manet*. Dr. Wyllie may not have distributed titles with so free a courtesy as Dr. Haldane. But the above letter will satisfy Dr. Cumming that he was wrongly informed that "the secretaries had invariably avoided using the title of 'Doctor' to their licentiates." It is only fair to the licentiates to make the College take at least half of the responsibility of the use of a wrong title; and the College, it is to be hoped, will be magnanimous enough to accept this measure of blame. We consider this controversy closed; but we shall reserve space next week for a communication from the College, which we confess to thinking should have reached us before this time.

CONSERVATIVE SURGERY.

AN extremely rare, if not altogether a new, operation was performed at the Middlesex Hospital on Wednesday, March 8th, by Mr. Morris.

A woman about thirty-three years of age had for fourteen months been suffering from a myeloid tumour of quite the lower end of the radius, which gradually expanded the bone until only a thin shell of it remained. It extended upwards along the forearm for about 4 in., and was slightly connected with the periosteum of the ulna. As the patient refused to undergo any operation by which her hand would be removed, and as all the soft structures appeared to pass over the tumour, Mr. Morris determined to remove the lower two-thirds of the radius, and two or three inches of the lower end of the ulna. This was done successfully without dividing any trunk nerve or artery, except the anterior interosseous, at their lower end; and the only tendons cut were those of the supinator longus and the pronator radii teres at their points of insertion into the radius. The guide to reaching the radius, and thus to lifting aside the soft structures from the tumour, was the radial nerve. This was found as it passes on to the back of the forearm between the supinator longus and the long radial extensor of the wrist, and then those muscles were separated up as high as the lower border of the supinator brevis; the nerve being kept, with the extensor muscles, on the back of the forearm, and the long supinator being raised with the muscles on the flexor aspect.

A portion of the lower end of the ulna was removed for a further reason than because of its connexion with the tumour, as it is expected that there will be less deflection of the hand to the radial side than must necessarily have been the case had the ulna been left untouched. The patient has done uninterruptedly well so far, since the operation.

The application of a ligature to the anterior interosseous artery could be effected without much difficulty, Mr. Morris thinks, by employing the same incision and guide as were used in this case.

SANITARY PROGRESS IN RURAL DISTRICTS.

THE Registrar-General has, in recent reports, called attention to the fact that, both actually and relatively, while the sanitary condition of our large urban population, judged by the standard of mortality statistics, is improving, that of our rural population is either stationary or shows retrogression. This may be partly due to the steadily increasing aggregation to the smaller towns, and especially to manufacturing and mining villages within the rural districts of the Registrar-General. Beyond this, however, there is the undoubted fact that the magnitude of the responsibilities imposed upon sanitary authorities by the Public Health Acts of 1872 and 1875 has been less generally recognised in rural districts than in large towns. But a comparatively small proportion of the agricultural portion of our forty English counties has yet been combined into sanitary districts, in order to secure the services of scientific and trained medical officers of health, paid to devote their whole time and energies to the cause of sanitation. The necessity for combination in rural districts invests the reports of health officers of combined districts with exceptional interest. Unfortunately, in too many of these reports relating to combined districts, the want of carefully prepared vital statistics prevents the formation of a sound opinion as to the effect of sanitary organisation and intelligent work upon the public health of rural populations.

Dr. Sandford, the medical officer of health for the combined district of Herefordshire, has recently published his annual report, which, judging from the notices in the local newspapers, of which we have been favoured with copies, is entirely wanting in such mortality statistics as would afford indication of the general health of the county during the year. There can be no doubt about the amount of useful work which has recently been done in this Herefordshire combined district, when we are told that its preliminary survey disclosed nearly four thousand existing nuisances which were dangerous to health, and that within a year more than three thousand of these were removed at the cost either of the owner or occupier, without resort to legal proceedings. Now, the removal of all these nuisances cannot fail sooner or later to improve the health and lower the death-rate of the population of the district. The district has an area of about 576 square miles and a population

which we estimate to have been 92,724 in the middle of last year. It would be interesting to know what the death-rate of this district was during the year, and whether it showed any decrease from the rate which prevailed when these four thousand nuisances flourished. Dr. Sandford does not appear to give any information on this point, but we calculate the death-rate at 19·7 per 1000 during 1875, which was 1 per 1000 below the average rate in the aggregate English rural population. Dr. Sandford, in pointing out the principal difficulties which beset rural sanitation, calls especial attention to the wretched dwellings of the farm-labourers, and states that hundreds of cottages are absolutely unfit for human habitation. The danger of the present system, by which cases of infectious disease are sent into the infirmaries of our workhouses, is also dwelt upon. The report closes with some very suggestive remarks upon the necessity for the combination of sanitary authorities in rural districts, which appears to be the only way to ensure effective sanitary work among rural populations. Dr. Sandford's report must, however, carry conviction that real sanitary progress has already been made in that part of Herefordshire included within his combined district.

THE EAGLEY EPIDEMIC.

DR. SERGEANT, medical officer of health for Bolton, in his monthly report to the Sanitary Committee of the Corporation, wisely enforces the necessity for the compulsory registration of infectious disease as the necessary condition for the arrest of epidemics. It is not often that an entire district is in, practically, the sole charge of the medical officer of health, as was the case at Eagley, but it is to this circumstance that we must ascribe the prompt arrest of the epidemic, which might otherwise have proved much more disastrous both at Eagley and Bolton. Dr. Sergeant points out that very commonly epidemics in large towns are only detected by the excessive mortality, too late for quick arrest. It is clear that the medical officers of health can only act effectually when they are informed of every case of infectious disease, not when it is over, but as soon as it occurs, and this end can only be obtained by compulsory registration of every case. Dr. Sergeant states that not one house in which the milk from the contaminated source was consumed did he find free from disease. As a further illustration of the deleterious influence of the milk, he states that vomiting in some cases came on immediately after taking it, especially in an unboiled condition. In a family of nine, eight of the members who drank the milk had typhoid fever; the mother, who did not like it, and took none, remained perfectly well. The virulence of the disease appears to have been much influenced by the amount of milk taken. Sewage contamination of the water admitted to have been used for washing out the cans was obvious enough; specific contamination could not be traced, but there was abundant evidence that some person who used the stream had suffered from diarrhœa—a very suspicious circumstance, which suggests the probability of actual typhoid contamination; this fact, however, could not be proved.

From another place near Bolton, Astley Bridge, the news comes to us of a fresh epidemic of typhoid fever, of smaller proportions, but of sufficient gravity. In this case, also, suspicion points to milk as the source of infection, although with less certainty than in the Eagley epidemic. In 11 out of 13 cases milk from the same farm had been used in greater or less quantities. But in 10 out of 12 families where the same milk was used, Dr. Settle, the medical officer of health to the Astley Bridge Board, could trace only two additional cases. Only one fatal case has occurred. The water used on the farm is that supplied by the Bolton Corporation. The cows are said to be healthy. Of course water may become contaminated during storage as well as in its source, and it is certain that no safety is to be obtained from milk infection except by the periodical inspection of all dairy and dairy-farm arrangements.

DEVELOPMENT OF UNFECUNDATED OVULES.

SEVERAL observers have noted the occasional partial development of ovules which have not been exposed to the possibility of fecundation. The fact was mentioned by Bischoff and R. Leuckart, and M. Moquin-Tandon has recently communicated some analogous and more detailed observations to the Académie des Sciences. The first phases of segmentation were distinctly observed in the egg dropped by a female frog which had been kept in confinement for about four months, and secluded from all possible intercourse with the male. In the ovule, first two large vertical fissures were seen, and then an horizontal fissure. The segmentation then proceeded in a less orderly way, the vitelline spheres multiplying irregularly and becoming of unequal size. The process was more rapid than in fecundated eggs which were allowed to develop at the same temperature. Only a small number of the ova presented this evidence of commencing development; the majority died without any sign of segmentation. In all cases the phenomena soon ceased, the spherules produced separated, and the whole mass began to decompose. Sometimes death occurred after the division into two or four segments, sometimes at a more advanced period, but the ovule never assumed the mulberry look. M. Moquin-Tandon points out that the observation establishes incontestably that the ova of vertebrata not impregnated by spermatozoa may pass through the earliest stage of development in certain conditions the exact nature of which is at present unknown. These facts may be placed beside those of the same kind observed by Bischoff on the sow, by Hensen on the rabbit, by Agassiz and Burnette on fish, and especially with the remarkable fact observed by Oellacher that in fowls kept far from a cock unfecundated eggs underwent segmentation in the interior of the oviduct.

THE SHEFFIELD ANALYSES.

MR. ALLEN, the Sheffield borough analyst, whose conduct in analysing medicines supplied from prescriptions has been so severely assailed, addressed two letters to the Health Committee, which have been lately published. In reference to the alleged invidious selection of chemists, he states that the samples submitted to him were distinguished merely by special marks or numbers, and that he was ignorant of the names of the dealers from whom most of the specimens were obtained. Out of twenty mixtures submitted to him for analysis fourteen were correctly made up, and in only three was there any considerable departure from the amount prescribed. In these three instances he had good reason to believe that neither the iodide of potassium nor the quinine was adulterated. All three errors were on the side of deficiency. With reference to the alleged insignificance of any saving that could be effected by a fraud in the prescription of iodide of potassium, he points out that the value of the amount of iodide of potassium would be 5d. or 6d., while the price of quinine is such that the omission of one-third or one-fourth the prescribed quantity would enable the vendor to undersell considerably another dispenser who introduced the full amount. Mr. Allen disclaims altogether any responsibility for the publicity his report received. The importance of the subject is, indeed, sufficient explanation. We think that it is a matter of regret that the chemists, in whose prescriptions a considerable deficiency was found, were not prosecuted. The subject of accurate dispensing is

so important that the example of the Sheffield committee and analyst should be followed where sufficient analytical skill is available.

DEATH OF DR. PARKES, F.R.S.

THE profession will learn with feelings of deep regret of the loss it has sustained in the death of Dr. Parkes, which melancholy event took place at his residence, Bitterne, near Netley, on the 15th instant. Prof. Parkes's state of health had for some time been such as to give rise to a feeling of grave apprehension in the minds of his numerous friends. He had slightly rallied, however, on Sunday, and a very faint glimmer of hope arose that his valuable life might be prolonged. The name of Dr. Parkes has latterly, in connexion with Practical Hygiene, been a household word; but his scientific work covered a great variety of subjects. His abilities were great and varied, his culture even greater. His industry and thirst for knowledge amounted to a passion, and the charms of his gentle character endeared him to everyone, and most of all to those who knew him best. In addition to the numerous anxious inquiries that were made during the illness which has deprived the medical profession of one of its brightest ornaments and the world of a really good and philanthropic man, we understand that the Queen, with that gracious sympathy with suffering which Her Majesty always evinces, made inquiries as to Dr. Parkes's condition.

THE BIRMINGHAM IMPROVEMENT SCHEME.

IT is somewhat singular that the Radical town of Birmingham should be the first to put into operation the provisions of the Artisans' Dwellings Act passed last year, and that the warmest advocate this Conservative measure has had should be Mr. Joseph Chamberlain, the able representative of Birmingham's most advanced Liberal principles.

The inquiry now being held by Mr. Thornhill Harrison, C.B., one of the Inspectors of the Local Government Board, is of the highest importance, not only to Birmingham, but to all large centres of industry. Should this scheme, which involves the disturbance of 3351 houses in the "unhealthy area," be sanctioned by the Local Government authorities and by Parliament, an excellent example will have been set to other great towns to follow the wise course which Birmingham has initiated.

In opening the inquiry last Wednesday, Mr. Harrison first heard the official representations that had been made to the Council by Dr. Alfred Hill, the medical officer of health to the borough, and then took the evidence of the inspector of nuisances and the borough architect. He will next take into consideration the scheme of improvement proposed, and lastly will hear the objections of persons who are locally interested in the scheme.

THE TREATMENT OF TAPEWORM.

A RETURN of the quantity of the several drugs in most general use for the treatment of tapeworm, in the public hospitals of Paris during the last ten years, has been made by the Director of the Central Pharmacy. A comparison of the relative quantities consumed during the first and second halves of the decennium supplies an interesting indication of the professional verdict as to their relative value. The average quantity of kousso consumed annually was more than twice as great during the four years since 1870 as during the six years before. The amount of pumpkin-seeds employed has not quite doubled; that of pomegranate-bark has remained almost stationary; and that of the male-fern has more than doubled. Kousso and male-fern thus appear to be the remedies on which Parisian experience shows most reliance can be placed. M. Colin, however, in a recent paper on Tænia in the French Army, advocates very strongly the use of pomegranate-bark. He asserts that when the precaution was taken never to administer a purgative before the vermifuge, the head of the worm was expelled, in three cases out of four, by a single dose. A purgative given before simply tears away the segments, leaving the head attached, and the head is then undisturbed by the special medicine.

CONSULTING PHYSICIANS IN COUNTY COURTS.

WE are always reminded of what the old physicians called an *error loci* when we see physicians in county courts, or, as they say in Scotland, the Sheriff's Court. We lately commented on a case in England. Another in point has just transpired in Scotland. Dr. Charles Bell sued Mr. Robert Melrose, farmer, Baldbridge, to recover the sum of £21, being the balance of an account of £42. The pursuer explained that his usual fee was from £2 to three guineas per hour. He arrived at midnight, found the hotels all shut, and had to wait till the morning, the patient meantime dying. The defender paid £21, but refused to pay more. Dr. Dewar-Durie, of Dunfermline, said that he had frequently called the aid of medical men from Edinburgh—Christison, Begbie, Simpson, Syme, and others,—but had never paid them more than fifteen guineas, even in wealthy cases. The Sheriff found that forty guineas was not a reasonable charge, that the sum of twenty guineas paid was more than a reasonable charge, and assoilzed (here is a word for a Spelling Bee) the defender with expenses.

THE MIDDLESEX HOSPITAL.

A VACANCY has been created in the staff of this institution by the resignation of Dr. Robert Liveing. Dr. Liveing, who has held the post of physician for upwards of four years, has, we believe, taken this step in consequence of the increasing demands upon his time in the pursuit of that branch of medicine in which he has deservedly obtained considerable reputation. In the well-being and improvement of the Middlesex Hospital Medical School Dr. Liveing devoted much time and labour, and it will be gratifying to all past and present students to know that he will probably remain in connexion with the skin department of the hospital. The vacancy in the staff of physicians will doubtless be filled by the appointment of Dr. Cayley, at present senior assistant-physician to the hospital.

EPIDEMIC PNEUMONIA.

THE points of resemblance between the clinical history of acute pneumonia and that of acute general diseases give considerable interest to the occasional epidemics of pneumonia of which records exist. They have been for the most part described by older writers, but some recent outbreaks are alluded to by Dr. Sturges in his recent monograph on pneumonia. One of these occurred in Iceland in 1863, of great severity. It has been carefully described by Hjatelin. Another epidemic occurred at New Brunswick in the 22nd Regiment in 1867. Griesinger pointed out the relation pneumonia seems sometimes to bear to malarial influences, and at a recent meeting of the Académie de Médecine a further contribution to our knowledge on the subject was made by Dr. Bourgade, who read a paper "On Intermittent Broncho-Pneumonia." His conclusions were that remittent or intermittent broncho-pneumonia is frequently observed in the central region of France, and that it should properly be regarded as an imperfectly developed form of paludal fever. It is characterised by a remittent pyrexia, with special congestive phenomena in the bronchial tubes and

the lungs. It differs from ordinary pneumonia by the varieties in the seat and succession of the physical signs, by its irregular course, and especially by the periodical appearance every day or every third day of an accession of fever, in which the temperature suddenly rises, several degrees of defervescence occurring suddenly after a certain number of hours. No other remedy is required than sulphate of quinine; this, given as soon as possible after the commencement of the disease, cures it without special local treatment.

ZYMOTIC DISEASE IN THE LONDON SUBURBS.

THE last Weekly Return of the Registrar-General showed that during the second week of March zymotic disease was more fatal in what the Registrar-General calls the outer ring than in London itself. Whooping-cough is just now the most fatal zymotic disease in and around London; the annual death-rate from this disease during the week ending 11th inst. was equal to 1·2 per 1000 in registration London, and to 1·4 in the outer ring. Six fatal cases of whooping-cough were registered at West Ham, five at Kingston, and four at Willesden. Measles is fatally prevalent at Richmond and Carshalton. In Croydon two more deaths were referred to fever, making twenty-five fatal cases since the beginning of the year. Two more fatal cases of fever were reported in Enfield sub-district, which contains Ponder's-end, which has recently been suffering from an outbreak of typhoid fever.

A CURIOUS BEQUEST.

AN aged jeweller and merchant of Birmingham named William Dudley, who amassed a princely fortune, has given £100,000 to trustees for the following benevolent objects:—1. To lend sums of money at a low rate of interest, on their giving approved security, to young tradesmen commencing business. 2. To relieve, by annual or other grants, poor tradesmen of good character who shall not have received any parochial relief. 3. To afford to such charitable institutions in Birmingham, founded for the relief of human suffering, as they may require it, any surplus income not required for the purposes mentioned in the former clauses.

The medical charities of Birmingham will probably receive no inconsiderable share of the income of this handsome benefaction, for the simple reason that the trustees will find it almost an impossibility to comply with the first wish of the donor, and from there being already many other ways of relieving the wants of those whose good is contemplated in the second clause; while for the relief of human suffering they can have no difficulty in dispensing all the funds at their disposal.

KING'S COLLEGE.

THE following changes have taken place at King's College, consequent upon the resignation of the chair of Medicine by Dr. Johnson:—A chair of Clinical Medicine has been established, and Dr. Johnson has been appointed Professor, he retaining, at the same time, his present appointment of physician to the hospital; and Dr. Beale has been appointed Professor of Medicine. The surgical staff of the hospital is also to be increased by the appointment of another assistant-surgeon.

WE understand that an association called "The Queen's University Graduates' Association in London" has recently been formed, under the presidency of Mr. W. MacCormac, of Harley-street, which has for its objects the promotion of social intercourse and intimacy amongst the graduates of the Queen's University in Ireland residing in or near London, and the maintenance and extension of the interests of the University.

THE King's Lynn board of guardians have been greatly exercised on the subject of granting medical relief to paupers. After considerable discussion, the following resolution was adopted and ordered to be forwarded by the clerk to the Local Government Board:—"That, in the opinion of this board, the system of granting medical relief is defective, and conduces to foster pauperism, and the board humbly suggests to the President of the Local Government Board that in any Poor-law Amendment Bill brought before Parliament it would be expedient to introduce a clause sanctioning the granting of such relief *on loan*, whether the medical officer of the union be paid by salary or fee." There is much to be said on both sides of this question, and it requires considerably more ventilation and discussion than it has yet received.

THE fourth annual report of the sanitary condition of Scarborough has just been issued by Dr. J. W. Taylor, medical officer of health for the town. There are no features of special interest to the profession or the public embodied in the report. During the past year enteric fever and whooping-cough were the most destructive of the zymotic class of diseases, while there was a considerable infantile mortality from diarrhœa. Enteric fever was credited with fifteen deaths, most of which were found on examination to be due to deficient sanitary arrangements in the houses, the drains being improperly connected, "and in some instances absent altogether." The death-rate of Scarborough in 1875, including the visitors, was 20·14 per 1000 annually.

AT a late meeting of the managers of the Metropolitan Asylum District, Mr. Shaw Stewart, in presenting the annual report of the Stockwell Hospitals' Committee, brought into special prominence a fact which we commend to the attention of the Anti-vaccination League. He showed, with regard to the patients treated in the Small-pox Hospital, that while among the thirty-four cases with good and moderate vaccination marks not a single death occurred, the rate of mortality of those who had not been vaccinated was as high as 45·8 per cent. The perversity and obstinacy of the people who denounce the Vaccination Acts are too great for us to indulge in the hope that they will be convinced even by such irrefutable proofs of the beneficence of the Acts.

IN a report of the sanitary condition of Barnsley during 1875, Dr. M. T. Sadler deals with the outbreak of enteric fever which occurred in the town in the year. He is enabled to state that in all houses where the disease showed itself the drainage was defective, and the cellars usually contained a quantity of foul water. In the quarter where the deaths took place a sewer had burst a few days before the appearance of the fever, setting at liberty a large quantity of offensive matter which had been pent up for some time by the frost. The death-rate for the period was 26·88 per thousand. Infantile mortality appears to be very high in Barnsley.

THE Medical Officer of Health for Bradford, in a recent weekly return, reports that diphtheria is somewhat prevalent in that town, although no case had proved fatal. Most of the cases had occurred in houses of a superior class, in most of which, however, serious sanitary defects were discovered on examination. The sanitary defects in houses of this class are, it is to be feared, not confined to Bradford.

WE are asked to state that Mr. Haviland intends to offer himself for re-election, as Medical Officer of Health to the Northamptonshire Sanitary Districts.

IN answer to Mr. Errington last week in the House of Commons, Viscount Sandon stated that in England considerable progress has been made in settling the basis of a Conjoint Scheme in examinations for medical diplomas, which he hoped would be satisfactory to all parties. We hope so too. But we are not so sanguine as Lord Sandon seems to be.

WE regret to learn that Sir J. Cordy Burrows, of Brighton, is seriously indisposed.

Analytical Records.

TURTLE JELLY.

(BRAND AND CO., LITTLE STANHOPE STREET, MAYFAIR).

THIS is a perfectly clear jelly, made from real turtle, and flavoured slightly with lemon or orange. It is an excellent preparation, and will form a valuable addition to the *menu* of the invalid. We have already seen it used with success in cases where ordinary food was retained with difficulty.

ESSENCE OF BEEF, MUTTON, VEAL, AND CHICKEN.

(BRAND AND CO.)

Although these preparations can now hardly be called novelties, we notice them on account of their great value in medical practice. They consist of the pure juice of the flesh, extracted by heat and clarified, but not concentrated and otherwise untouched. The juice sets to a thin jelly as clear as sherry, and the flavour of the meat is perfectly preserved. The first idea of this kind of preparation is due, we think, to Dr. Druitt, and if so, the profession is indebted to him for a very useful combination of food and stimulant. The essences are best used cold, but may also be liquefied by heat, and used as enemata. Of course they do not keep long when once opened.

The same firm prepares *Concentrated Extract of Beef*, and *Invalid Turtle Soup*, both excellent in quality.

GRANULAR EFFERVESCING SULPHATE OF QUINETUM.—GRANULAR EFFERVESCING CITRATE OF IRON AND QUINETUM.

(YOUNG AND POSTANS, BAKER-STREET.)

A short time ago we spoke favourably of Whiffen's quinetum, which consists of all the alkaloids of East Indian red bark. We have now two very elegant preparations of quinetum, which we find by analysis are correctly described by their titles. They ought to prove useful.

HUNYADI JANOS BITTERSALZQUELLE.

(J. W. VICKERS, 5, NICHOLAS LANE.)

This new mineral water from Hungary is somewhat remarkable in composition. It is distinctly alkaline, from the presence of alkaline carbonate, and it contains also considerable quantities of earthy carbonate. But its character is due to the enormous amount of magnesium and sodium sulphates present in it. Its taste is like that of a somewhat strong solution of Epsom salts, and it must therefore be classed as one of the most powerful, if not the most powerful, of saline aperient waters.

EMULSIFIED COD-LIVER OIL. EMULSIFIED COD-LIVER OIL WITH HYPOPHOSPHITE OF LIME.

(EVANS, SONS, AND CO., LIVERPOOL.)

Emulsions of cod-liver oil have been gaining ground rapidly of late. The samples before us, though good of their kind, are not very remarkable, and we can only say of them that they are correctly described by the labels on the bottles.

DR. RICHARDSON'S LECTURES ON INDUSTRIAL PATHOLOGY.

III.

THE third lecture on Industrial Pathology, delivered by Dr. Richardson before the Society of Arts, had for its subject the injuries inflicted on the workmen engaged in industrial pursuits by the inhalation of gases, vapours, and fumes.

The lecturer first entered into a definition of the terms "gases," "vapours," and "fumes"; and then passed to a description of the difference of physiological action that is implied between the processes of inhaling actual solid but finely divided particles, such as dusts, and of inhaling matter existing in the condition of gas, vapour, or fume. He showed that, in the case of dusts, the particles were retained, for a time at least, in the structure of the lungs, where they set up local irritation until they were expelled; and that the action of them was therefore directly local, and only became general by the indirect influence which they exerted. The gases and vapours, on the contrary, excite at once both a local and a general influence. They may be causes of local irritation, and many of them are so; but they have a more immediate action upon the body at large, through the blood, into which, according to their rate of diffusion, their solubility, and their affinity for water and other constituent parts of the blood, they are absorbed and carried into the circulation. Many of them are so poisonous that they would kill directly by the constitutional mischief they excited if their inhalation were long-continued. The gases and vapours differ also from dusts in respect to the methods that are available for preventing their first entrance into the lungs. Dusts may be prevented entering the lungs by various mechanical means of filtration; gases are not as yet capable of filtration—at all events, not by such means as are practically applicable in the arts at this present stage of our scientific progress.

What are called fumes approach nearer to dusts in their mode of action than the gases and vapours. Some fumes are quickly condensable on the respiratory tract, and these act almost after the manner of dusts; others which are more easily sublimed diffuse more freely, and partake therefore somewhat of the quality of vapours. After recapitulating and enlarging on the effects of carbonic oxide and of sulphurous acid, to which attention had been called in the previous lecture, and which will be found noticed in THE LANCET of January the 8th, an incidental reference was made to the ophthalmia produced by sulphur in the workers of the vineyards of the Herault, described by Mr. Bouisson, of Montpelier. The disease is induced by the diffusion of sulphur in minute subdivision, as it is scattered over the leaves of the vine in order to destroy the parasitic oidium, which is so injurious to the plant. The sulphur is distributed over the leaves either by means of a finely-sifting sieve or by bellows. The effect of this is to inflict on the workpeople who are employed at the task, women and boys principally, an acute ophthalmia. The pain, redness, and swelling of the eyes are most distressing in the middle of the day, when the heat and solar radiation are most intense. One other noteworthy point connected indirectly with this same subject came also incidentally into notice. The oidium itself has been assigned as a cause of disease. It has been assumed that the parasitic cryptogamic oidium may induce by inoculation disease in the human subject, a theory which was not a little strengthened by the discovery made in May, 1858, by Prof. Laycock, the distinguished professor of medicine in the University of Edinburgh, of the presence of the *Oidium albicans* in the pellicle or false membrane formed in the throat of a patient suffering from diphtheria.

Lastly, it deserves note that a similar parasitic fungus, called the *Oidium aurantiacum*, was discovered by the late Dr. Robert Dundas Thomson, in a specimen of bread made from an inferior kind of flour. From these circumstances it has been inferred that disease may arise from food made from a bad flour containing the parasite. The idea is as yet speculative, and the evidence on which it is based inconclusive, but it opens up an interesting side view of the causes of numerous diseases.

The effect of *sulphuretted hydrogen*, taken into the body

by inhalation, was next considered, and the physiological action of this gas was described from the lecturer's own observations, and from those of the late Dr. Herbert Barker. The gas diffused in breathing air in the proportion of 1·714 per cent. is immediately fatal, and in the proportion of 0·205 per cent. it produces quick insensibility, with feebleness of respiration and muscular tremors. Even when diffused in the much more minute proportion of 0·056 per cent.—in which solution it is after a time undefinable by the sense of smell—it produces, when inhaled for a short time, diarrhœa, rapid pulse, heat of the surface of the body succeeded by coldness, and after-symptoms of low continued fever.

These are the physiological effects of sulphuretted hydrogen as they have been experimentally determined, but it is difficult to discover whether they are definitely traceable in the human subject amongst those who are employed where this gas is liberated. In sewer air the gas is present, and the concentrated air from cesspools in which the gas is present has been found experimentally to produce, when inhaled, the same symptoms as those which are caused by the gas itself. From an inquiry whether amongst men working in sewers the symptoms which are observed in experimental research are specially manifested, the lecturer had not been able to arrive at any certain affirmable result. The same applies to manufactory work where the gas is used, and probably it only becomes injurious when, by accident, it is breathed in such large quantities as to prove rapidly fatal.

The effect of *ammonia* when it is long inhaled, as it is in the cases of some manufactures, was next inquired into. The opinion arrived at was, that the continued inhalation is a cause of undue fluidity of the blood and of anæmia, but that the symptoms induced are not severe. The question was also raised whether the inhalation of ammoniacal compounds derived from organic decomposing materials was injurious to the workers in such materials, and to what extent they were endangered. Those who are engaged in the labour of making catgut strings or cords, those who are engaged in dressing skins into rugs—fellmongers—and bone sorters and boilers, are especially subject to these odours. A woman who was engaged in the first of these occupations, and who came for medical advice to a public dispensary to which the lecturer was physician, was so offensive she could not be tolerated in the waiting-room with the other out-door patients, and she had to come in after all the rest had gone. The odour from the fellmonger's yard and from the bone-boiler's premises is detectable for long distances from the place. It would be assumed, at first thought, that the operatives in these works, breathing for many hours every day such an atmosphere, must needs suffer from some marked disease. The evidence in support of this suspicion is, however, all but negative. The lecturer has been unable to discover any definite symptom of disease connected with these callings, as the result of the labour. Neither can he find any statistical facts that illustrate an unusual mortality from such labours.

(To be concluded.)

THE GULSTONIAN LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

THESE lectures commenced on Friday, the 10th inst., and concluded on the 17th. The lecturer was Dr. A. B. Shepherd, who chose for his subject "The Natural History of Consumption." The following is a brief outline of the first lecture.

The lecturer commenced by alluding to the difficulties which had sprung up concerning the nature of tubercle and its relations to phthisis, and showed how, in the desire to establish some special structure in the former, the clinical features of the disease were wholly left out of sight. He proposed to make an attempt to link together the purely microscopical details with the facts of clinical observation. Quoting from Morton, he pointed out how that writer apparently believed that there were two forms of phthisis—the one in which there was a primary growth of tubercle, and the other in which the growth was not the chief factor in the disease. Laennec held strongly the tubercular view for all cases of phthisis, and believed that the tubercle, which might be grey or yellow, and crude, was distinctly extra-alveolar and extra-bronchial. He showed how the miliary grey tubercle developed into the larger crude form, which, by its extension, enveloped the bronchi, so that they became hardly visible, while it avoided the bloodvessels. Bayle had, indeed, noticed that many grey granulations presented an opacity in the centre, and to this Laennec added that they might soften down. A similar view was that held by Dr. Wilson Fox, who says rightly that if the term tubercle be limited to the grey granulation, its part in destruction of the lung is small; whereas if it be regarded as a diffused growth, its part in the phthisical process is large. But it was doubtful whether the grey granulation ever underwent cheesy change. This was even pointed out by Rokitansky with regard to some forms of the grey nodules, whereas the retrogressive changes which do take place, and are the essentials in phthisis, are really alveolar. Klein, in his recent work on Lymphatics of the Lung, when speaking of tuberculosis, points out that there are three varieties of grey semi-transparent granulation, one only of which (viz., that formed from alveolar products) undergoes cheesy degeneration. The "giant cells" are now relegated to epithelial cells, and doubtless the peculiar cell-forms recently described by Rindfleisch in tubercle will share the same fate.

Dr. Shepherd then gave a brief outline of some cases of acute tubercular phthisis in the adult, which ran their course in a few weeks, without any notable physical signs, and proceeded to describe the pathological products met with in acute tuberculosis. These are (1) masses of vesicular pneumonia, (2) collections of lymphoid cells around the bronchi and bloodvessels, and (3) groups of proliferated capillary nuclei. Each of these, to the naked eye, resembles the typical grey tubercle of authors. But where vesicular pneumonia exists alone, the lung does not feel as if studded with hard points. Acute miliary tuberculosis was, he held, an affection of infection and absorption. He related the case of a boy, ten years of age, in whom there was progressive condensation and excavation of the left lung, death taking place from tubercular meningitis, and miliary tubercle being found elsewhere in the body. In such a case as this, either miliary tubercle was present from the first, giving no indication of its presence until it invaded the pia mater, or its presence there and in other organs was secondary to the pulmonary disease. So many different products had been aggregated under the term "tubercle," that it would be almost better to discard the word altogether so far as pulmonary consumption was concerned, or, at any rate, let it be allowed only to stand for the secondary and always fatal growth—viz., acute tuberculosis, for which "granular" would not be a good expression, since not only did Bayle include some cases not strictly tubercular under this head, but the word "granule" has a far other histological significance. In discarding, then, the old definitions, he by no means wished to detract from the value of Laennec's work, who, indeed, merited the eulogy passed on him by Addison. In conclusion, Dr. Shepherd referred to Andral, whose ardent search after simplicity and truth and love of facts had left him a name which may well be added to those great leaders, Hippocrates, Aretæus, Sydenham, and Morgagni.

THE MIDWIFERY LICENCE OF THE ROYAL COLLEGE OF SURGEONS.

THE following are the resolutions proposed by Dr. Robert Barnes at the late meeting of the Metropolitan Counties Branch of the British Medical Association:—

"1. That, in the opinion of this Branch, it is inexpedient and injurious to the public interests that any persons should be placed on the *Medical Register* with only a limited diploma and after examination in one department of medicine only; and that, if it be the fact that the charter of the Royal College of Surgeons of England requires it to confer the registrable title of licentiate in midwifery on persons without a complete examination on the subjects of general medical education, it is desirable that the College should apply for an amendment of their charter in this respect.

"2. That meantime, and in case the College of Surgeons

shall proceed to institute separate examinations in midwifery for persons under the present obligations of their charter, it is desirable that an adequate curriculum be required of candidates, and that the examination be such as to afford a guarantee of the acquirements of the candidates in medicine, including physic, surgery, physiology, pathology, chemistry, and materia medica, as well as in midwifery."

The resolutions were put to the vote and carried.

ASSOCIATION OF LEGALLY QUALIFIED DENTAL SURGEONS.

THE new Dental Society, concerning the formation of which we have recently written, will exist under the above title, and is founded upon the principles and for the objects contained in the following resolutions:—

1. That the new society be called the Association of legally qualified Dental Surgeons.

2. That the chief of its objects shall be—(*a*) The establishment of an improved code of ethics. (*b*) The endeavour to encourage a higher educational standard, both general and professional, for those who may hereafter practise the special branch of dental surgery. (*c*) The furtherance of modes of practice compatible only with the highest professional status.

3. That in order to carry out the above objects the Association shall, in its commencement, meet at least six times in the year.

4. That the business of the Association shall be conducted by a chairman, vice-chairman, a treasurer, a secretary, and a committee of members.

5. That for the present it is not contemplated to publish any regular transactions of the Association.

6. That all qualified medical practitioners be eligible for membership.

7. That the Association shall also consist of honorary members.

The following gentlemen compose the committee and office-bearers:—Chairman: Samuel Cartwright, F.R.C.S. Vice-Chairman: S. J. A. Salter, M.B. Lond., F.R.S. Council: H. Craigie, M.R.C.S.; T. Edgelow, M.B., M.R.C.S.; D. Napier, M.R.C.S. Treasurer: A. Coleman, F.R.C.S. Hon. Secretary: S. Hamilton Cartwright, M.R.C.S.

The first meeting of the Association will be held on Wednesday, the 22nd instant, at the rooms of the Medical Society of London, where we have reason to believe it will obtain permanent accommodation.

Correspondence.

"Audi alteram partem."

THE DISCUSSION ON SYPHILIS.

To the Editor of THE LANCET.

SIR,—As the suggestion which I made at the Pathological Society is a novel one, and in your abstract of the discussion my meaning is not perfectly conveyed, perhaps you will kindly allow me to record it a little more clearly.

The researches of the last few years tend to show that the lymphatic system is much more widely spread than was formerly supposed. In addition to the long-recognised vessels and glands, not only the serous sacs (pleura, peritoneum, &c.), but also, amongst other structures, the perivascular canals, the fissures between the canaliculi of the testis, and those ill-defined pouches of loose connective tissue which allow a muscle to glide over periosteum or a subjacent muscle (I do not refer to the true bursæ mucosæ) have been discovered to be lymphatic spaces, whilst the tonsils are collections of follicles representing lymphatic gland in its simplest form. The interstitial spaces between the bloodvessels and the substance of the brain can be filled from the true lymphatic vessels of the pia mater. The frequent occurrence of gummata in situations of this kind is notorious.

Following up Mr. Hutchinson's hypothesis that "tertiary gummata are regrowths in structures left behind from the secondary stage," I urged that we might go still further, and indicate their probable situation. I suggested that, during the exanthematous stage of syphilis, germs or potentialities of disease were imbibed from the tissues and carried into these now recognised extensions of the lymphatic system; that there they lay inert, often for a considerable time, until some circumstance with which we are not acquainted called them into action; and that then the outgrowth occurred.

My colleague, Dr. Gowers, who was present at the meeting, has since called my attention to an interesting fact in his own experience which tends to support my hypothesis. He has never found, he tells me, a gumma actually in the nervous substance. Even when apparently embedded in the cerebral substance it could, in every case which he has seen, be traced to a fold or reduplication of the pia mater occupying some deep sulcus. In the rare cases in which such a growth is found in the brain away from such membranous fold, he believes that it has probably started from a perivascular sheath, since when a pia matral gumma invades the brain-substance it does so by sending processes or outrunners along these perivascular canals, the mass of the growth advancing by the lateral extension of these advanced posts.

If future investigation should show that tertiary gummata are always developed in connexion with some portion of the lymphatic system, the fact would go far to prove the correctness of Mr. Hutchinson's view.

I am, Sir, your obedient servant,

Grosvenor-street, March 11th, 1876. THOMAS BUZZARD.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

To the Editor of THE LANCET.

SIR,—In the last number of the *British Medical Journal* I find the Editor suggests a "personal conference" between the Council of the Association and the medical men of Brighton as "the most hopeful way of arriving at an amicable solution." It is far from my wish to throw any impediments in the way of such conference; but, before it is agreed upon, I may be permitted to remind the Council and Members of the Association that the opposition to the next annual meeting taking place in this town did not originate at the late meeting of the local medical men, nor does it depend only upon the question of the addresses. So long ago as the 28th of last August a letter from me appeared in the columns of THE LANCET calling the attention of the Council and Members of the Association to the feeling which existed amongst the profession at Brighton respecting the proposed meeting of 1876, from which I beg to make the following extract:—"My impression is that if the opinion of the profession were now taken upon the question (of the annual meeting) three-fourths would be found to give their votes against it." This letter was confirmed by Mr. Branwell in a subsequent number of the same journal. I am not aware that the opinions of the medical men of Brighton have changed since the above date, and fear accordingly that if the Council and Members of the Association still persist in their intention of coming here in August next, they will be far from meeting with a cordial reception from their professional brethren—a state of things, I should imagine, unexampled in the history of this or any kindred society.—I am Sir, your obedient servant,

WILLIAM KEBBELL, M.D.,
Senior Physician to the Sussex County Hospital.

Brighton, March 14, 1876.

THE DENTAL PROFESSION AND THE ODONTOLOGICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—I have read Mr. Turner's letters which have been inserted in the last two numbers of THE LANCET, and I shall feel greatly obliged by your permitting me to make a few remarks in reply to those communications. I give Mr. Turner full credit for good intentions, and I am sure that he takes a warm interest in the welfare of our branch of the profession; but he must bear in mind that it cannot reasonably be expected that all his professional brethren shoul-

coincide with the views which he and others arbitrarily assume to be the only means by which the tone and status of the profession are capable of improvement.

The real secret of the strong feeling exhibited is the formation of an association of legally qualified gentlemen practising dental surgery, the objects of which association are quite distinct from those of the Odontological Society; and I assure Mr. Turner that although it necessarily commenced as an "embryo," it has now a local habitation and a name, and is too healthy "to need dry nursing at the expense of an old and respected institution." It is difficult to understand clearly what Mr. Turner means in the paragraph—"Further, we have on our list of members several gentlemen who, while holding high professional diplomas, have not the essential one for a dentist, viz.—the L.D.S." And again, "The question of limiting the membership of the Odontological Society to the holders of the dental diploma is not a new one to the Council." If it be meant that a surgeon cannot be a practitioner in dental surgery—that is to say, a properly educated one—without the L.D.S., I differ entirely from such a conclusion, for surely no one can assert that the fact of being a surgeon can render a man less capable of rendering himself complete master of the more strictly mechanical parts of the specialty he practises. It is my opinion that it would be far easier for an educated surgeon to do this than it would be for a non-qualified person to instruct himself in medicine, surgery, anatomy, and physiology, a knowledge of which subjects is necessary to every reasonably educated dentist.

It is on this account that I, with many others, feel that a qualification ought to be the *sine qud non* of membership of the Odontological Society, and Mr. Turner seems in reality to be of the same opinion.

It is now sixteen years since the Dental Licentiateship was instituted, and rather more since the Odontological Society was founded. At the first formation of that Society gentlemen were necessarily admitted without qualifications; but when the L.D.S. was instituted, a term of some three years was allowed for all existing practitioners to obtain that diploma with a nominal examination, their character and professional conduct being in accordance with the requirements of the College of Surgeons. Bearing this in mind, and also the fact that, within even the last three years, all dentists of a certain age have been allowed to go up for examination *without submitting to any curriculum*, I do think that, with such facilities for becoming qualified, qualification should be considered the indispensable requirement for membership.

There can be no excuse for those younger men who have entered practice since the establishment of the dental licentiateship not to become qualified, and continuing to admit such without qualification savours of injustice to those who have qualified, and operates as an incentive to others not to qualify. I trust that the suggestion made by the chairman of a meeting of dentists, who were for the most part wholly unqualified, held at Manchester in the autumn of last year, may never be countenanced—viz., the admittance of all persons practising as dentists to registration whatever their antecedents may have been. Such a scheme could never tend to the elevation of the profession.

With regard to the Licentiateship in Dental Surgery, I quite agree with Mr. Turner as to its value, and the good that its institution has effected in elevating the status of dental surgery; and I think that Fellows and Members of the College of Surgeons, and those holding University or other recognised medical degrees, would do well to take this special diploma, if only for example's sake.

For some reason, considering the number of dental students who have gone through their two years' work at the Dental Hospital and School, as also at a general hospital, comparatively few fulfil their promise of the examination for the licentiateship, and this fact is an additional ground for insisting upon the possession of some qualification for admittance to the Odontological Society. Honours easily attained are lightly esteemed.

Mr. Turner's feelings are hurt by the term "laxity" used in your editorial foot-note, appended to his first letter. I beg in conclusion to say, that greater stringency in the interpretation of the rules will, I feel sure, meet with the approbation of many members of the Odontological Society.

I am, Sir, your obedient servant,

Old Burlington-str. SAMUEL CARTWRIGHT.

MR. WESTON ON THE USE OF COCA LEAVES.

To the Editor of THE LANCET.

SIR,—So much has been said of late in the public press regarding my use of the South American "Coca leaves," that I deem it my duty to contradict an impression which is erroneous.

During my first trial in London on the 9th of February, while walking from the sixty-fifth to the seventy-fifth mile, I chewed the coca leaves freely, acting under the advice of my medical adviser in America. I found that they did not have the effect expected; that is, they would not keep me awake or in the least stimulate my efforts, but, on the contrary, they acted as an opiate, and forced me to sleep; which was mainly the cause of my being absent from the track for forty-five minutes after the seventy-eighth mile on that occasion.

Previous experience in America, taken together with this later experiment with coca leaves here, lead me to the belief that, far from being any assistance in any trial of physical endurance, the use of the leaves in question would prove a great detriment; hence I abandoned them, *and have not even tasted them since my first trial in London, which closed on the evening of February 9th.* I deem it my duty to thus make public this explanation, in view of the fact that I daily receive scores of letters asking me if I believe in the efficacy of coca leaves; and also in justice to the efforts of Dr. Pavy, whose investigations would have been somewhat disturbed had I allowed myself the use of any false stimulant.

In conclusion, permit me to add that, after an experience of upwards of eight years in public life, during which time I have walked *over* 14,000 *miles*, experience has taught me that Nature should not be outraged by the use of artificial stimulants in any protracted trial.

I am, Sir, with sentiments of respect and esteem,

Faithfully yours,

EDWARD PAYSON WESTON.

Grosvenor-road, Highbury, N., 15th March, 1876.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF LORDS.

VIVISECTION.

LORD HENNIKER said that he need not trouble their lordships with more than a few words in asking the question of which he had given notice. He proposed the question because he was aware that a large number of persons felt very strongly, as he himself did, on the subject of vivisection. They fully appreciated the successful effort made by the Royal Commission to present their Report as early as possible, with a view to immediate legislation on the subject, and they hoped that the Government would deal with the question in the same spirit by bringing in a Bill with the least possible delay. In conclusion, he begged to ask the Lord President whether Her Majesty's Government intend to bring in a Bill this session to carry out the recommendations of the Royal Commission on the practice of subjecting live animals to experiments for scientific purposes.

The Duke of RICHMOND and GORDON said the Royal Commission had sat for a considerable time and taken a great amount of evidence on that subject. The Government did not in any way underrate either the importance of the evidence taken before the Commission or the very able and clear manner in which the whole question had been gone into and reported upon. He was sorry that he could not do more than give his noble friend the assurance that the matter was under the consideration of the Government, and he was unable to say when any legislation would be attempted in regard to it.

HOUSE OF COMMONS.

TYPHOID FEVER IN DUBLIN.

Mr. CLIVE asked the Surveyor-General of the Ordnance whether it was true that there were many cases of typhoid fever in the garrison of Dublin; and if so, whether any and what barracks in that city were free from the said fever.

Lord E. CECIL was understood to say that, according to a return which he had received, there were six cases in all of typhoid fever reported from the Pigeon-house, Shep-

herd's-bush, and Island-bridge Barracks, and that there were no other cases reported from any other barracks in Dublin.

SCURVY.

In reply to Mr. Ward,

Sir C. ADDERLEY said,—The Board of Trade has received a Report from the Receiver of Wrecks at Cardiff that the *William Wilson*, of Whitehaven, has put into that port with six severe cases of scurvy on board, and that the provisions and lime-juice were exhausted when the vessel arrived. The medical officer was instructed to proceed at once to Cardiff to hold an inquiry, and report. Another medical officer, Dr. Ladbroke, is at present holding an inquiry into the case of the *Talisman*. In the case of the *Black Prince*, an inquiry was held. The medical inspector, Dr. Spooner, reported that the causes were dirty habits of the crew, bad water taken in at Bassein, and the use of cook's slush by the men. He also observed that scurvy increased where teetotalism was practised, and recommended a ration of spirits in such cases. The *Duke of Sutherland*, of Swansea, arrived at Liverpool with one case of scurvy, and no complaint was made; therefore, no inquiry. No new provisions for preventing scurvy have occurred to her Majesty's Government. The penalties on shipowners for any default of precautions are ample. The provisions of the Act of 1867 have greatly reduced scurvy.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A SPECIAL meeting of the Council of the Royal College of Surgeons was held on Thursday last. We cannot do more this week than merely mention some of the subjects dealt with. The report of the Committee appointed to consider the regulations of the Fellowship Examinations was presented. At the same meeting the resignations of Dr. Johnson and Dr. Barnes as examiners were also received, while Mr. Curling was re-elected Examiner in Surgery, and Mr. Hulke was appointed to the Board of Examiners as successor to the late Mr. Gascoyen. The report of the Committee on Examinations in Anatomy and Physiology was adopted.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on March 9th:—

Dutton, Edward George, Peel Lodge, Hammersmith.
Hallsworth, Francis Arthur, Atherstone, Warwickshire.
Iles, Alfred Robert, Fairford, Gloucestershire.
LeQuesne, Edwin Joseph, Metropolitan Free Hospital.
Thurstan, Edward Paget, Guernsey.

The following gentlemen passed the Primary Professional Examination on the same day:—

Joseph Jarrom Harvey, Queen's College, Birmingham; Spencer Clabon Harris, Westminster Hospital; John William Meek, Guy's Hospital.

THE will of William Sands Cox, F.R.C.S. Eng., who died 23rd December, has been proved under £50,000.

WE are asked to state that the publication of the *Journal of Psychological Medicine* has been changed from Messrs. Smith, Elder, and Co., to Messrs. Baillière, Tindall, and Cox.

Medical Appointments.

AGAR, F., L.R.C.P.I., M.R.C.S.E., L.M., has been appointed Medical Officer and Public Vaccinator for the Enfield Highway District of the Edmonton Union, vice Carver, resigned.

ALFORD, G. E., M.R.C.S.E., has been appointed House-Surgeon to the Weston-super-Mare Hospital and Dispensary, vice Archer, resigned.

BOURKE, W., M.B., C.M., has been appointed House-Surgeon to the Clinical Hospital, Cheetham-hill-road, Manchester, vice Yonge Smith, resigned.

BRAMHALL, S., L.R.C.P.Ed., L.S.A.L., has been reappointed Medical Officer to the Oystermouth Castle Lodge of Odd Fellows, M.U., The Mumbles, near Swansea.

BROWNE, V. E., M.B., L.R.C.S.I., has been appointed Physician to the Hospital, Bourke, New South Wales.

BRUCE, R. W., L.F.P.S.Glas., has been appointed Surgeon to the Glasgow Medical Missionary Society.

COGHILL, J. G. S., M.D., F.R.C.P.Ed., late Lecturer on General Pathology at the Edinburgh Medical School, has been elected Physician to the Royal National Hospital for Consumption, Ventnor, as colleague to Dr. Arthur Hill Hassall.

EVANS, G. H., M.D., has been appointed an Assistant-Physician to the City of London Hospital for Diseases of the Chest, vice Shepherd, appointed a Physician.

GRIMWOOD, H. C., M.R.C.S.E., L.S.A.L., has been appointed Resident House-Surgeon to the Portland Town Free Dispensary, vice Bubb, resigned.

HAMILTON, J., L.R.C.P.Ed., L.F.P.S.Glas., L.A.H.Dub., has been appointed Medical Officer of Health for the Swadlincote Urban Sanitary District, vice Hall, deceased; and Medical Officer to the Countess of Chesterfield, Netherseal, Cadley-hill, and Heathcote Collieries, vice Hall, deceased.

HOBSON, L. J., M.B., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Bristol General Hospital.

JOHNSON, W., M.D., L.R.C.S.Ed., has been appointed House-Surgeon to the Tiverton Infirmary and Dispensary, vice Adey, resigned.

JONES, Dr. P., has been appointed Medical Officer to the Friendly Societies of Rhos, vice Roberts and Davies, whose appointments have expired.

MACMANUS, G., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.Dub., has been appointed Medical Officer for the Dublin and Meath Branch of the Midland Great Western Railway Benefit Society, vice Moyle, deceased.

PARKS, C. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 3 District, and Medical Officer and Public Vaccinator for No. 7 District of the St. Columb Major Union, Cornwall, vice Martyn, resigned.

ROUGHTON, W., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Macclesfield General Infirmary, vice McMillan, resigned.

SEWELL, H., M.R.C.S., L.D.S., has been appointed Dentist to the Clergy Orphan School.

WALSHAM, W. J., F.R.C.S.E., has been appointed Surgeon to the Royal Hospital for Diseases of the Chest, vice Cooper, resigned.

WILLAN, R. M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Claines District of the Droitwich Union, vice Rogers, resigned.

WOOD, J. E., M.R.C.S.E., L.S.A., has been appointed Medical Officer in Ordinary to the Leamington Provident Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

BRUNJES.—On the 10th inst., at Brook-street, Grosvenor-square, the wife of Martin Brunjes, M.R.C.S., of a son.

GRANT.—On the 29th ult., at Corradino House, Malta, the wife of Surgeon-Major R. A. P. Grant, Army Medical Department (late 43rd Infantry), of a daughter.

KAY.—On the 5th inst., at Crystal Palace Park-road, the wife of J. W. Kay, M.D., of a son.

NUNN.—On the 8th inst., at Maplestead, Bournemouth, the wife of Philip W. G. Nunn, L.R.C.P.L., of a daughter.

ROBERTSON.—On the 10th inst., at Bow-road, the wife of E. Bruce Robertson, M.B., of a son.

TURTLE.—On the 6th inst., at Woodford, the wife of Frederick Turtle, M.D., of a daughter.

MARRIAGES.

FOX—SACRÉ.—On the 11th inst., at St. Stephen's Church, Chorlton-on-Medlock, Manchester, by the Rev. R. Abbey Tindall, M.A., rector, assisted by the Rev. Fergus Hill, B.A., Richard Dacre Fox, F.R.C.S.E., Manchester, to Mary Augusta, third daughter of Charles Sacré, C.E., of Ardwick. No cards.

MAY—OEHLHAFFEN.—On the 3rd ult., at Fort Cairns, Orange Walk, B. Honduras, by the Rev. A. Sullivan (after a civil ceremony before the Magistrate at Fort Mundy), Cecilia Adèle Aloisa, elder daughter of Gustav von Oehlhaffen, Magistrate of the Northern District, to William Allan May, Surgeon Army Medical Staff, younger son of Joseph May, F.R.C.S.E., of Stoke Damarel, Devon, England.

TURNER—DAVENPORT.—On the 9th inst., at St. Nicholas', Brighton, by the Rev. J. M. Davenport, M.A., of Wolverhampton, brother of the bride, assisted by the Rev. A. Cooper, M.A., of Brighton, Theophilus Bryett Turner, M.R.C.S., second son of the late Rev. Thomas Turner, M.A., Rector of Port Royal, Jamaica, to Edith, younger daughter of J. T. Davenport, Esq., of Wyndham House, Brighton. No cards.

DEATHS.

CARR.—On the 28th ult., W. B. Carr, Surgeon, of Long Eaton, aged 30.

DIXON.—On the 27th ult., at Dorewards-hall, Rivenhall, Essex, Henry Dixon, M.R.C.S.E., aged 80.

GILES.—On the 14th inst., at Churchfields-place, Margate, Samuel Giles, M.D., B.A.Lond., late of Lewisham High-road, London, in his 44th year.

HAMMOND.—On the 7th inst., at Henley-road, Ipswich, Charles Chambers Hammond, M.R.C.S.E., aged 83.

HEFFERNAN.—On the 22nd ult., at Malta, returning from India, Patrick J. Hefferman, L.R.C.P.Ed., Surgeon, Bengal Army.

MASON.—On the 8th inst., at Surbiton-hill, Charles Ignatius Mason, L.R.C.P.L., aged 47.

MILLIGAN.—On the 6th inst., John Milligan, M.R.C.S.E., of Whinburn, near Keighley.

NAYLER.—On the 9th inst., at Brighton, George Nayler, F.R.C.S.E., of Savile-row, aged 48.

SHEFFIELD.—On the 3rd inst., in his 33rd year, R. L. Sheffield, Esq., F.R.C.S.Ed., &c., Surgeon to the Metropolitan Free Hospital, and Assistant-Surgeon to the City Orthopædic Hospital. Deeply lamented.

SIMSON. — On the 9th inst., at Glenfinlas-street, Edinburgh, James Simson, M.D.

TWEDDLE.—On the 7th inst., at Governor House, Keswick, Cumberland, John Tweddle, Esq., Surgeon, aged 44 years.

WILKIE.—On the 4th inst., at Whitwell, Hants, Dr. George Wilkie, aged 74.

[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.]

Notes, Short Comments, and Answers to Correspondents.

GOOD WORK ILL-DONE.

PERHAPS it is scarcely fair to characterise the charity bestowed in relief of "the halt, the blind, the dumb, and the imbecile" as good work ill-done. So far as the promoters and agents of this gracious service to suffering humanity are concerned, the enterprise is every way commendable. Nevertheless, "M.D.," writing to the *Globe*, exposes so much misconception and misdirection of benevolence in the matter that we are at a loss how else to describe it. The facts adduced leave no room to question the circumstance that "subscribers to existing charities" are unwittingly giving "two-thirds of their donations" towards relieving parishes from performing the duties thrown upon them by Parliament. In a word, the institutions maintained by voluntary subscriptions are doing gratuitously the work for which provision is made by law, and so made that these charities might at this moment be receiving payment out of the rates for the services they render. It seems that under the Acts in force boards of guardians are not only empowered, but required, to defray the cost of maintaining and educating the blind, the deaf and dumb, idiots, and imbeciles. They have power to do this by paying for the support and instruction of the afflicted poor in the institutions which at present receive and keep them in charity. Not only, therefore, is this charity an economic blunder; it prevents the institutions so acting from extending their aid to cases of greater need and urgency, and with stronger claims than the pauper class now crowding their wards, and almost monopolising their assistance. "M.D." states that 900 blind adults are wanting instruction and employment in London alone, while a large number of children of both sexes are unprovided with suitable training. Unfortunately the law confounds the blind, the deaf and dumb, with idiots and imbeciles, and the result, as might have been expected, is confusion and neglect on the part of the Poor-law authorities. It is much to be regretted that the managers of existing institutions for the training of these special classes do not enforce their claim to payment for the maintenance of pauper inmates, by proceedings against the local boards. This would raise the question. Unless the terms upon which poor children and adults admitted to the public charities have been selected amount to a contract vitiating the legal claim, we believe the managers of any of these institutions might recover reasonable charges against the parishes or the unions. In any case it would be worth while to try. Meanwhile the general position of matters, the neglect of the Poor-law authorities to carry out the Acts empowering and enjoining them to make special provision for the classes specified, commensurate with their needs and adapted to their peculiar requirements, should be brought before the Legislature. It is a subject of great moment and interest, and one which might worthily employ some of the spare time of the Upper House before the heavy business of the session crowds its papers. We do not think "M.D." will succeed in attracting adequate attention to the subject in the columns of the lay press; but real good will be done if the question can be earnestly raised in Parliament. The facts "M.D." has collected supply ample evidence, and his handling of the subject is trustworthy and impressive.

F. R. G. S.—They are Government appointments, and their value varies. In the instance referred to we believe the salary attached is a small one.

THE ACTION OF CHLORAL HYDRATE IN INSANITY.

To the Editor of THE LANCET.

SIR,—Like Mr. Bond, I have seen in private practice considerable mental perturbation resulting from the use of chloral hydrate as an hypnotic in ordinary affections,—in one case especially, a pregnant woman, where a twenty-five-grain dose produced flushing of the face, muttering delirium, and general restlessness. But the symptoms and appearance of the patient looked more like the second stage of anæsthesia than insanity. Doubtless in a brain normally irritable, or the subject of obscure hereditary disease, constant or even occasional administration of chloral or opium might produce or call up the latent disorder either from undue excitement or depression; but, as far as my experience goes, the continued use of chloral is the reverse of stimulating to the brain. In acute mania, accompanied by hallucinations, its use seems to be indicated. This condition, which is frequently paroxysmal and recurrent, will not yield to cannabis indica alone or hyoscyamus, but a twenty-grain dose of the chloral hydrate in syrup and water will frequently secure for the patient a good night. Opium in such cases seems to aggravate the excitement, besides deranging the digestive functions. As soon as the chloral has done its work it should be stopped, for its prolonged use gives rise in the insane to a condition resembling anæmia—viz., pallor of the countenance, feebleness of the pulse, and a state of mental and bodily inertia. It would, therefore, appear that for the production of "acute mania" something more than the "excessive" use of chloral hydrate is required. Still it may cause, as we have seen, temporary excitement in a perfectly healthy brain; but its "excessive" use, I should say, would be more likely to bring about a state of *dementia* from imperfect cerebral blood-supply in consequence of diminished cardiac force. If chloral hydrate *per se* give rise to insanity in any given case, and again exercises a curative influence in similar cases, there is afforded a plain indication of its homœopathic tendency. But this is delicate ground, and I can only say, in conclusion, that the two questions herein involved may be worth further inquiry. I remain, Sir, yours &c.,

ALEX. M'COOK WEIR, M.D., &c.,
Assistant Medical Officer, County Asylum, Nottingham.

March 13th, 1876.

CONVALESCENT HOSPITALS.

THE Mayor of Liverpool, in presiding at the annual meeting of the Convalescent Institution of that town, made some observations in harmony with remarks which we have on several occasions felt called upon to offer in favour of establishments of the kind. He referred especially to their beneficial effect in checking pauperism by thoroughly reinvigorating the health of breadwinners who had for some time been laid aside in town hospitals. The Council, in their report, regret, however, that whilst the institution is furnished to accommodate 100 patients, and is capable of holding 50 more, the weekly average of only 38 inmates has been maintained during the past year; and they feel justified in complaining of the want of appreciation of the excellence of the institution manifested by the medical profession in Liverpool as well as by the public. The sum of 10*s.* a week per patient has been found inadequate to meet the expenses of food and maintenance, and the general accounts for the year 1875 show an excess of expenditure over income of upwards of £500.

Mr. F. Colman.—Consult a medical man.

MEDICAL AID ASSOCIATIONS.

To the Editor of THE LANCET.

SIR,—In response to your editorial comment upon "Observer's" letter in your last issue, regarding the Salop Medical Aid Society, I beg to give you a few particulars about the working of a similar Association to which I am medical officer. I do so the more readily because my experience differs so widely from that of the unfortunate medical officers as related by your correspondent.

This Association comprises 24 Lodges, numbering 2016 members, 200 families, and 50 wife members. We estimate each family at about 4, which gives considerably over 3000 individual members in the aggregate. The area is a radius of only three miles; if required to go beyond this distance, I may charge 1*s.* 6*d.* per double mile or portion of a mile beyond three miles. The hours of attendance at the surgery are 8.30 to 10 in the morning, 1 to 2.30 in the afternoon, and 6.30 to 8 in the evening; on Saturdays, 8.30 to 10 and 2 to 5. No attendance on Sunday, except for urgent cases. All messages for attendance at home must be left at the surgery before 10 A.M. During the latter six months of 1875 there were 1393 cases attended both at surgery and at homes, 3561 prescriptions dispensed, and 1956 visits paid. There is no assistant as yet, but it is expected there will be soon, and, from my experience of the Committee, it will be as soon as they can safely afford.

So much for the work. (See Addendum.) It is tolerably hard, but not *excessive*, because I have a capital horse provided for me free of all expense. A comfortable eight-roomed house, with proper conveniences, is supplied, free of rates and rent. Gas is also free, and within the last few months an allowance of coal has been added for the waiting-room. The salary is £200 for three years, and, if the parties are mutually satisfied, an increase of £50 for the next two years. Midwifery cases bring in 10*s.* 6*d.* a piece, and 15*s.* if not paid within fourteen days; abortions pay the same rate; and there are some other small extras, such as 1*s.* for each copy of certificate that may be wanted (as many members belong to other Benefit Societies).

I cannot say I find the patients "exacting and unreasonable"; such are exceptional, although, of course, there are always some troublesome individuals. Most of them appreciate the services rendered, and occasionally make a present to the medical officer when extra attention has been necessary. This, of course, does not happen often.

Our Association at one time found themselves with a large deficiency. They did not reduce the medical officer's salary, but asked for a levy per member, which was at once agreed to, and they are now in a satisfactory condition. I think the working men deserve great credit for the successful way they can manage an experiment of, to them, such magnitude, and I am sure that in course of time they will gladly pay their medical officers better. It should not be forgotten that for these appointments there are nearly always a large number of good candidates, even at the salaries offered, and naturally the Committee cannot see why they should pay more than the apparent market price. At the time of my appointment there were sixty-six applications, "all with first-class testimonials, and in practice."

From my own experience I can recommend such a situation to anyone wishing to see a large amount of varied practice, and an opportunity of gaining knowledge that will be very useful as a preparative to general private practice. It may be hinted also that it has often been found a capital introduction to a suitable sphere for ultimate establishment, and this is precisely the reason why local medical men view such institutions with but small favour.

Addendum.—Terms of Subscription.

Family member	10*s.* per annum.
Widow and orphans of deceased member ...	10*s.* ,,
Voluntary member	4*s.* ,,
Wife of member	5*s.* ,,
Widow of deceased member	5*s.* ,,

Each of the amalgamated Lodges pays to the Association 3*s.* per member per annum.

The term "family" includes only the wife, unmarried daughters, and such sons as are under eighteen years of age and residing in the same house with their parents. Yours faithfully,

March 6th, 1876. A SURGEON TO A MEDICAL AID ASSOCIATION.

An Old Sailor.—We are sorry we cannot give any precise answers to the questions. If the Bill now before Parliament becomes law, there is little doubt that persons with such experience as our correspondent has would be eligible for appointments.

SPECIAL INSTITUTIONS.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers recommend a school or institution where a girl of nearly nine years of age can be taught to speak, who is unable to say more than two or three words. The child is not deaf or idiotic, though her intellect is not quite up to the usual standard of children at her age. She is a healthy, well-grown girl, but with rather a large head.

I remain, Sir, yours truly,

March, 1876. ENQUIRER.

A WRETCHED TRIBE.

THE *Morning News* correspondent on board the *Challenger* discovery ship describes a race of people inhabiting a part of the coast two or three degrees south of Cape Tres Montes, not very far from the Land of Desolation, in South America. These people live in the most primitive huts; their food consists chiefly of dead fish or seals that may float ashore; they sleep coiled up like dogs on the wet ground; and their only clothing is a scrap of sealskin slung across their shoulders. Both men and women are stunted and filthy, their faces being bedaubed with white clay. The wretchedness of these beings is, as usual, not realised by themselves, who are said to enjoy a certain measure of animal contentment, a result to which no doubt their bracing climate greatly contributes.

An Inquirer.—1. Not necessarily, though this is the rule.—2. No.—3. The only thing against the hypothesis of morphia-poisoning is the duration of life (three to four days), which is unusually long.—4. The diagnosis between morphia-poisoning and acute serous effusion would be made by other symptoms, chiefly pulse, respiration, perspiration, and temperature. But we know very little of serous effusion as distinguished from uræmia. The entire case put is exceedingly like death from an overdose of morphia in a case of kidney disease, said overdose not being probably more than an ordinary dose for a sound person.

Cappagh.—Apply to the Home Office for such an appointment.

THE PROPER FUNCTION OF THE NURSE IN THE SICK-ROOM: PROPOSED CORPS OF FEMININE ATTENDANTS FOR MIDDLE-CLASS PATIENTS IN PRIVATE ABODES.

To the Editor of THE LANCET.

SIR,—As a mother of a large family, and a housekeeper of twenty years' experience, I would gladly be permitted to address a few thoughts to your influential readers on an important subject. I have ever earnestly joined in all discreet efforts to obtain profitable employment for single women, such as the general convictions of the public have opened to our sex—occupations suitable to their natural characteristics.

Several excellent ladies and a few imaginative gentlemen have been led, in their advocacy of this movement, beyond the bounds of discretion, and urgently claim as proper scenes of feminine activity certain forms of industry which have hitherto been monopolised by men. The most generally objectionable of these suggestions, and the most thoroughly condemned by all thoughtful women, is the attempt to usurp the functions of the medical practitioner. Even if our sex were physically as well fitted as the men to undertake the duties of that profession, the obstacles to the medical education of women are insuperable. The expenses of a professional curriculum are so great that society cannot afford to maintain a double set of schools in order to secure the problematical benefit of obtaining a body of female doctors. The women of England who have created their own moral code, and sternly defined *their distinctive point of honour*, who insist that boys and girls shall learn grammar and arithmetic in separate buildings, will never consent that young men and women shall study anatomy and physiology *tête-à-tête*. I may ask, too, what father or guardian out of Bedlam would contemplate with patience the placing any young maiden in such juxtaposition under such circumstances? The reply is obvious. It is, therefore, impossible to train up a sufficient supply of female physicians and surgeons. Society will not countenance such an undertaking; and even if such a result could be attained, the mothers and mistresses of households, who exercise such absolute control over social customs, would never tolerate the substitution of such shallow sciolists for the old trusted and proved "family doctors" and accoucheurs. The very idea is absurd. The healing art was invented by men, and the prescription which dictates the treatment of disease should emanate from men exclusively; but in the carrying out the details of the prescription the agency of women becomes invaluable, and it is because they are anxious to enlist the patronage of the faculty in favour of their exertions to organise a corps of well-disciplined nurses for the use of private abodes as well as public asylums that all reasonable women deprecate the intemperate pretensions of such of our sex as aspire to fill the seats of a learned profession, whose diplomas are the fruit of a long and laborious career of study. Such delusive projects can only awaken suspicion and distrust, instead of confidence and support.

The medical faculty are the first to declare that in the sick chamber and in the character of a nurse the true genius of the woman shows all its excellence. Without her aid the theory of the prescription could not be realised; but her efficiency is exactly proportionate to her conformity to its directions. Passive and intelligent obedience is her most important attribute.

The impression seems now very general that there exists a crying want for trusty and well-trained attendants, not only in our public charities, but in our private dwellings, and several associations have been formed to supply this defect. As regards hospitals and open infirmaries, I think there is much exaggeration of the nursing deficiencies, and I am told by well-informed medical men that, in respect of vigilance and sympathy for sufferings, the attendants in our public sick-wards will compare advantageously with those of any Continental institutions. My visits to our metropolitan receptacles for patients forced upon me the opinion that great zeal and kindness animated the whole circle of treatment, and that no better school for the empirical training of nurses could be found. It appeared to me, moreover, that the convalescent female patients could be wholesomely tutored by taking part in the ward duties. If any amendment, however, be still desirable in these noble establishments, we may safely leave the remedy in the hands of such philanthropists as the Duke of Westminster, Sir Rutherford Alcock, and their associates, who are earnestly engaged in the reorganisation of our metropolitan charities. These gentlemen have founded two classes of sisterhoods, whose objects are different. The first are carefully "trained nurses" (many of them women of good family), who devote themselves to the care of severe cases occurring in private families or in hospitals. In each case they are paid highly for their services, which are acknowledged to be most valuable. The second class, such as the Metropolitan Nursing Association in Bloomsbury-square, consists pretty well of the same order of women; but their duties are limited to the abodes of the very poor, where they assist in fulfilling the instructions of the parish and dispensary doctor, and in doing the neglected menial and servile offices of the households. They give nothing either in money or kind; but they refuse no occupation, however repulsive. They are ladies paid by the Association, and are worthy of the highest commendation. The scope of these two sisterhoods does not include the exigencies that arise to the houses of the middle classes. The charges of the "trained nurses" are too expensive for ordinary pockets, and their keep is too costly; whilst the "dual nurses" are only designed for such households as touch the boundary of destitution.

The occurrence of sickness in an ordinary household is a grievous affliction, and the duty of nursing is apt to fall into incompetent hands, for the domestic education of our women is often sadly defective. Extraneous help becomes necessary, and the habitual charwoman is called in, who is probably as ignorant and unhandy as the inmates themselves. These useful drudges are happily ubiquitous, are not excessively paid, and in populous places their numbers are considerable. Most of them are retired domestic servants, and are more or less acquainted with household work. By judicious drilling their efficiency could be augmented so as to make them equal to the general duties required of nurses, such as the preservation of cleanliness and purity of air in the sick apartments, or even to undertake the simple culinary offices necessary to the comfort of the invalids. From this crowd of women it would not be difficult to select individuals of sufficient intelligence, firmness, and integrity to be entrusted during the absence of the doctor with the moral control of capricious patients. Ladies of great ability and social influence interest themselves in questions of home economy, and if they directed their attention to the organisation of these scattered persons into distinct guilds or "benefit clubs," where technical instruction could be imparted to them, their personal interests were consulted, and the gentle authority and refined example of the most highly cultivated of their sex brought to bear upon them, not only would these independent, forlorn units be compacted into a well-disciplined force, highly conducive to general economy and the comfort of many homes, but their individual happiness would be enhanced. It might not be necessary to impose on the members of such guilds the conditions of a "conobial life," the family connexions might be preserved, but facility of master and speedy communication would be indispensable.

I hope and trust that the utilisation of this at present entangled crowd of women, in the manner I have presumed to suggest, may enlist the approbation of your numerous readers, general and professional; and apologising sincerely for trespassing so much on your attention, and for the slips which have escaped from the transcriber whose pen I borrow,

I remain, Sir, your obedient servant,

Keppell street, Russell-square, March 1st, 1876. MARIA ROBINSON.

DR. CUMMING'S LETTER ON THE TITLE OF "DOCTOR."

SEVERAL correspondents send us copies of letters for publication which they have written to Dr. Cumming in answer to his letter to THE LANCET. We cannot afford space for them. But it will be seen that we have not lost sight of the main question between the College and its licentiates.

W. J. B.—We think the plan of meals as arranged in the school referred to by our correspondent excellent, providing the coffee and biscuit given out at 7.15 A.M. are not left to be taken at the discretion of the boys, but made a regular system. We strongly disapprove of the custom of giving boys meat three times a day; twice is quite sufficient, and parents should not be permitted to order it as an extra for their boys. When meat is sent from home, it should be given to the boy only at the time of the usual meat meal of the school. A lad who is so feeble as to require constant feeding and luxuries is not fit for the mental and physical strain of a public school.

Medicus.—The Colleges have not the power to fix minimum fees, and, we fear, have no inclination.

TYPHOID FEVER IN MAN AND DISTEMPER IN DOG.

To the Editor of THE LANCET.

SIR,—In the March number of the *Veterinary Journal* I observe Mr. Paton's remarks on this subject, and his reference to a case recorded recently in THE LANCET by "H. H." I have not had the advantage of reading the communication of "H. H." to you, and therefore I am unable to judge whether his case and mine are the same or not; but the main facts are so nearly alike as to incline me to think that the dog in question was my patient. The essential facts of my case are as follows.

On the 9th September, 1875, Mr. B., of Hendon, sent for me to see his dog, which I found to be suffering from distemper, complicated with congestion of the liver, and a thin bloody, fetid discharge from the bowels. Some opening medicine was given in opposition to my views. After a week's illness the dog died, and on opening it I found invagination of the bowels for about four inches, with inflammation of the contiguous parts. I did not observe any of the enteric post-mortem lesions which are known to me as occurring in human typhoid.

Mr. B.'s coachman, who complained to me of the intolerable stench from the dog, fell ill of typhoid, and died of it, and a stable lad was also attacked about the same time. Mr. H., the medical attendant, told me that he attributed the illness to the dog—a view which I ventured to think was hastily formed. On several occasions I called Mrs. B.'s attention to the defective state of the drains at the kitchen door. I also perceived an offensive smell near the gate entrance.

The coachman usually lived over the stable; but on the removal of his master's family to the seaside he stayed in the house, and would naturally leave and enter by the kitchen door; moreover, I understood that Mr. B. at last quitted the house, a very old one, on account of its defective drainage. It is situated at the bottom of a declivity, bounded behind by small wooden houses, some wooden sheds, and a stable, which are not models of sanitary perfection. The coachman, I understood, was consumptive, and several members of his family had died of phthisis, so that he would presumably be more vulnerable to the attack of typhoid than a robust man. I know nothing of the water-supply.

These facts, in my opinion, point to but one conclusion—viz., that the typhoid contagium proceeded from the drains, and not from the dog at all.

I am, Sir, yours &c.,

J. W. T. MOORE, M.R.C.V.S.,
Inspector of the Privy Council.

Neyland, Pembrokeshire, March, 1876.

WALL-PAPERS.

AN attempt was made recently at the Belfast Quarter Sessions by a merchant of Randalstown to recover damages from a dealer in room-papers, for the injury caused by the purchase at his warehouse of a room wall-paper that contained arsenic. It was proved by medical evidence that soon after the paper was put up, the plaintiff's children became ill with sore-throat and other symptoms of arsenical poisoning. The claim was for expense "in procuring medicine and medical attendance for the children." The case was dismissed because the plaintiff chose his own paper, and because there was no expressed or implied warranty that the paper was free from poison. The decision could not well have been any other; but the publicity given to the case will serve a useful purpose. Purchasers of wall-paper should require an undertaking that it is free from arsenic.

An Old Subscriber.—The legal fee for attendance before a magistrate is 10s. 6d.

RAPIDLY FATAL CASE OF INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—On the 9th January I was called to see J. B——, aged twenty-five years. On arrival I was informed that she had had no motion from her bowels for a fortnight, had complained of pain in left side, and thirst for the past two days. Her skin was pale; face pinched; eyes semi-closed and glassy; speech indistinct and muttering. She took a long time to answer my questions; said she felt very weak, and complained of pain in the left infra-mammary region. She was able to do the work of the house yesterday, but was forced to lie down at 7 P.M. on account of the pain in her side. Had taken two doses of salts and an ounce of castor oil for the constipation, none of which had any effect. Had no vomiting till this morning, but it has continued all day whenever she took food or drink. The vomited matter has now a fæcal odour, and very dark colour. She was very restless, and constantly called for a drink of water. Tongue dry, but clean; pulse 132, weak and thready; respiratory murmur slightly puerile on the right side; heart-sounds muffled, second scarcely distinguishable. On percussion I found the area of cardiac dulness diminished; no dulness to the left of sternum; abdomen was flattened; no hernial tumour in any of the usual situations; temperature 98°. I ordered mustard to the epigastrium, warm bottles to the feet, friction with flannels, and a tablespoonful of brandy every hour. I gave her an enema of castor oil and turpentine, and ordered the following:—Carbonate of ammonia, twenty-four grains; tincture of lobelia, one drachm and a half; tincture of capsicum, one drachm; water to four ounces: half an ounce to be taken every two hours. I also ordered a pill containing half a grain of opium and two grains of calomel every four hours. I had not got an O'Beirne's tube, or I would have injected warm water into the rectum.

Next morning at 9 A.M. she was pulseless; extremities cold. I was told that she had no motion after the enema, nor were any fæces mixed with it when it came away. (On two previous occasions she had symptoms like the present, but in a less severe degree.) I ordered another enema, after which she spoke a few words, but soon relapsed into the same state as before. At 6 P.M. she was quite speechless, evidently sinking very fast. There was a dark line, as if drawn by ink, immediately behind the alveolar border of the superior maxilla. Her eyes and mouth were semi-open. No vomiting since yesterday evening.

The remarkable points of this case are—1st, its having caused death in forty-eight hours from the commencement of the acute symptoms; 2nd, the vomiting only lasted twelve hours; there was none for thirty-six hours before death. As to the cause of the obstruction, Was it intussusception? Was the intestine constricted by a band of lymph or by the omentum? If the intestine was constricted, why was not the vomiting more persistent? There was no tympanitic distension of the abdomen, and no tenderness on pressure; no sign of peritonitis as far as I could see.

No post-mortem would be allowed by the relatives.

I remain, Sir, yours &c.,

Llanidloes, March, 1876. JOHN MORRIS, M.D.

THE DENTAL PROFESSION AND THE ODONTOLOGICAL SOCIETY.

Mr. J. S. Turner calls our attention to an error in his letter which we published last week. In the fourth and fifth lines of the fourth paragraph of his communication it is stated that "when the Society [the Odontological] was formed the London Dental Society was not in existence." It should have been, of course, "the licence in Dental Surgery was not in existence." The printer misread the initials "L.D.S." in the manuscript.

Mr. Ruttledge.—Declined, with thanks.

THE FAMILY OF THE LATE MR. BEALE.

To the Editor of THE LANCET.

SIR,—In again requesting you will kindly insert the further subscriptions to this Fund, I beg to inform you the amount received is not sufficient to enable me to proceed to Canada (the amount promised by the British Medical Benevolent Fund is only given conditionally upon sufficient being otherwise subscribed); and as the time draws nigh when I purposed starting, I should feel extremely obliged if you will make a further appeal on my behalf.

Subscriptions will be received by H. Hudson Buzz, Esq., M.R.C.S., 1, Grove-road, St. John's-wood; and R. Walter Goddard, Esq., M.D., 107, Edgware-road, Paddington.

British Medical Benevolent Fund...	£10	0	0
Sir Thos. Watson	2	0	0
Dr. R. W. Goddard	1	1	0
Christopher Heath, Esq.	1	1	0
Dr. C. Hare	1	1	0
Dr. Bissett Hawkins...	1	1	0
Dr. Stevenson	0	5	0
R. Ransom, Esq....	0	15	0
Miss Ransom	0	5	0
Sir H. Thompson	1	1	0
	£18	10	0

I remain, Sir, yours respectfully,

Junction-road, Holloway, March 15th, 1876. SARAH BEALE.

POPULAR LECTURES ON HEALTH.

THE Yorkshire Ladies' Council of Education appears to be doing a good work amongst the humbler classes in diffusing by means of lectures a knowledge of the laws on which the health and happiness of households so largely depend. The interest awakened on such subjects of discourse as "Preventable Diseases and how to avoid them" and the "Muscular System and the Skin" is stated to have been most encouraging at Leeds, and seems to warrant a hope that the importance of hygiene, and of physiological knowledge in its bearing on social comfort and prosperity, is becoming to some extent recognised by those classes which have hitherto been distinguished by their ignorance and disregard of the most elementary laws of health.

G. H.—Lists are sent from the respective institutions.

FOOTBALL.

To the Editor of THE LANCET.

SIR,—You say that football need not exercise the arms and chest, because rowing and cricket supply such exercise. I answer—

1st. Mr. M'Laren says (Physical Education, p. 37): "It will be found that the lower limbs and right arm have the lion's share of the employment or exercise in almost every one of our recreative exercises. Thus cricket: the lower limbs do the hardest work of the game, the right arm the remainder. Rowing: the lower limbs and loin."

2ndly. Rowing is seldom accessible, and cricket is expensive, and takes up much time. I am speaking of the young men of our great towns, on whose health and vigour our future as a nation mainly depends.

I will add, that as a school game the Rugby game has the additional advantage of giving drop-kicking as an occupation for spare time. I do not know how we should get on in winter without drop-kicking. We would have much more loafing; of that I am certain.

You also say that if more fatal accidents occur, there will be a strong movement against the game. Would this be fair? The true issue is the percentage of fatal accidents to the number who play, and their ratio to the amount of good done. The number of players is so great that there are certain to be fatal accidents. There must be these at any game which is so widely played.

No sane person attacks hunting on account of its accidents. It is felt, even when not openly admitted, that hunting, by keeping up the physical tone of our higher classes, and setting an example of manly sport to those below them, is an important factor in the prosperity of the nation.

If you hint at legislation in the background to put down unwholesome and dangerous practices, I cordially approve the principle of such legislation. Apply it to the case of youths who are immured in offices during all the daylight hours for months in the year, and then turned out into gas-lit streets. Compel the employers of such youths to give them access to gymnasia, fives-courts, &c., for at least one daylight hour, and you will save more lives in a year than football and hunting together would destroy in a century. Apply it to persons taking hard exercise in unsuitable clothing, in overheated rooms, in an atmosphere laden with carbonic acid, &c., and sitting down after midnight to feast on all sorts of unwholesome diet, and then turning out into the cold air about four o'clock in the morning, and you will do something to lessen the victims of that dire scourge, consumption.

The physical condition of the people is the most important of all national questions. I do not mean merely the death-rate or the amount of disease. I mean the amount of physical vigour, of superabundant and buoyant health and animal spirits. These are blessings too often ignored in the feverish scramble for wealth, or in the morbid timidity, engendered of enfeebled circulation, which dreads the sudden violent accident more than years of debility or disease. But they are blessings which we must secure, or we shall assuredly sink as a nation. As Mr. Sullivan said in the House of Commons the other day, "Within the last fifty years a terrific revolution has swept the people from the fields into the towns."

I appeal to you, as the leading medical journal in the kingdom, to take a broad view of whatever tends to mitigate the effects of this revolution. The spread of football is in my view one of the most hopeful signs of the day. I see the effects of it yearly, especially in so-called delicate boys coming here from a large manufacturing town. I thought of starting the "Association" game. Friends of mine, of great experience, counselled me not to do so. I studied all available evidence carefully and anxiously, and maintain the Rugby game, not as a matter of amusement, but on account of what seems to me its proved superiority in producing muscle, chest-girth, and generally good physique, as well as the moral qualities akin to such a physique—courage, endurance, and resolution. I ask for and invite the fullest inquiry and discussion; but let it be conducted on broad grounds, and not on the narrow issue of an exceedingly small percentage of accidents.

I am, Sir, faithfully yours,

March, 1876. HEAD MASTER.

P.S.—You are quite right about "picking up." It increases the danger slightly, and it injures the game.

SUGGESTIONS REQUIRED.

To the Editor of THE LANCET.

SIR,—I shall feel obliged for any suggestions from your readers in the following case.

A young lady, aged sixteen, of light complexion, and who has menstruated regularly since the age of eleven, and has good general health, has been troubled for the last two years with an affection of the skin, which commences with an erythematous redness which appears quite suddenly in one or more places, generally on the limbs, of about 3 in. by 1 in. In an hour or so the affected spot is devoid of the cuticle, which looks white and rotten, and bathed in a transparent fluid which does not scab. The surface looks red and irritable, and from the first is free from itching or pain; the fluid becomes muco-purulent, and the surface heals perfectly in ten days, to be followed in a few days by other parts being affected in the same way. She has never been free from this condition of things for more than ten days during the last two years. The ordinary remedies have been persevered with without avail. Outward applications do not seem to be indicated, as the part heals as quickly if left to itself. There is gout in the family, and the patient's urine is often full of lithates. The patient has never taken meat diet, as she dislikes it. There is no syphilitic history or symptom.

Yours truly,

March, 1876. A SUBSCRIBER.

CLUBS.

To the Editor of THE LANCET.

SIR,—In a recent number of your able periodical you refer to the "growing disposition to establish clubs of various kinds in London," and to the dangerous and injurious consequences resulting, it is to be feared, in many cases from these establishments.

On my own behalf, and on the behalf of many who view these clubs in the same aspect as you view them yourself, I beg to express my feelings of gratitude to you for having so practically, fearlessly, and intelligently called public attention to these mischievous establishments. The evening hours in a well-ordered family abound in happy opportunities of "strengthening and polishing the links" by which members of families are united together, and of entertaining and instructing the younger members of a family, so as to endear home and those who preside over home to their ardent and opening affections. Long experience in the world has shown to me in a most convincing light the perilous character of those institutions which draw away young men from the family circle, and tempt them to waste time and money in the company of the dissipated and the thoughtless! Some of my contemporaries in university life have advanced to high honours and a high position in the community; and on asking them some of the means by which they have outstripped others in the race of life, I heard from their own lips that it was the diligent and systematic improvement of the *evening hours* which signally helped them in their conflict with difficulties, and crowned their efforts with success! It is needless to say that those young men who go night after night to the "Junior Topers Club" to eat a bad dinner and to drink wine, for which they pay exorbitantly, and then spend the evening in losing money at cards or billiards, have a very poor prospect of emerging from mediocrity, and of being the founders of their own fortune, or a source of credit and happiness to their friends.

Sir, the writer of these lines can aver with perfect truth that he has witnessed scenes in families, caused by the fascinating and destructive influences of clubs, which he never can forget. This will help to explain the sincere gratitude which he feels to the Editor of THE LANCET for the wise and timely counsels which he has given to the young men of London and of other towns on the dangerous tendencies of clubs. The growing disposition to establish clubs is not confined to London; the mania is extending to the provinces, and has tended to increase the habits of drinking and gambling among young men. Yours faithfully,

NICHOLAS C. DUNSCOMBE,
Macroom, co. Cork, March 7th, 1876. Rector of Macroom.

Enquirer.—The lady should consult a medical practitioner.

Mr. P. E. Rivers.—In Gray's Anatomy.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Thos. Smith, London; Mr. Berkeley Hill, London; Professor Cleland, Galway; Mr. C. F. Maunder, London; Dr. Kebbell, Brighton; Dr. Sheen, Cardiff; Mr. Bull, London; Mr. Rivers, London; Surgeon-Major Longhead; Dromore; Mr. Ruttledge, Douglas; Mr. Smith, Leeston; Mr. Beaney, Melbourne, Australia; Mr. Wood, Leamington; Mr. C. Roberts, London; Mr. Colman, London; Mr. Nunn, London; Mr. B. Harrison, Liverpool; Dr. Spitta, Clapham; Mr. Dowse, Holloway; Mr. E. Gunn, London; Mr. Ingpen, London; Mr. J. G. Brown, London; Mr. Garner, London; Dr. Weir, Nottingham; Mr. Hatchard, St. Leonards; Mr. Kingett, Kensington; Mr. Hitchcock, Lewisham; Dr. Macpherson, London; Mr. Sedgwick, London; Mr. Moore, Neyland; Mr. Bullen, Kennington; Rev. N. Dunscombe, Cork; Mr. Wilson, Greenock; Mrs. Smythe, Ventnor; Mr. M'Swiney, London; Mr. Nicolson, Norwood; Dr. White, Manchester; Mr. Vawdrey, London; Mr. A. W. Gay, London; Mr. Wallis, Woodford; Mr. Barton, Ipswich; Dr. Mahomed, London; Mr. Bourke, Whitehaven; Mr. Elliott, London; Mr. Allen, London; Mrs. Beale, Holloway; Dr. Smith, Kilburn; Mr. Wood, Preston; Mr. H. Earl, Enfield; Mr. Graham, Stoke; Mr. Edmonds, Ware; Mr. J. E. Wharton, Burton; Mr. Chater, Sleaford; Mr. Sylvestre, Cannes; Dr. Russell, Glasgow; Mr. West, London; Mr. Parker, Birmingham; Mr. Atkinson, Brixton; Dr. Sergeant, Bolton; Mr. Fox, London; Messrs. Kingsbury and Co., London; Mr. Haviland, Northampton; Mr. Cayley, London; Mr. Sadler, Swindon; Mr. Wright, Skelmersdale; Dr. Bucknill, Rugby; Medicus; An Old Sailor; Cappagh; G. H.; Enquirer: H. B., Chatteris; J. H. G.; One of the Number who does not note anything; Breakers Ahead; The Registrar-General of Edinburgh; Nec timeo nec spero; Studens, Liverpool; J. F.; U. V. W.; Box; Alpha, Leamington; M.D., London; The Committee of the Salop Medical Aid Association; Novice; Assistant; W. G. F.; F.R.C.S. Eng., L.R.C.P. Lond.; E. S. G.; A. X.; A. B. C., London; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Philpots Poole; Dr. Lewis, Henfield; Mr. Nunn, Bournemouth; Dr. Norton, Kimbolton; Messrs. Smith and Son, Birmingham; Mr. Holden, Liverpool; Rev. A. J. D'Orsey, London; Mr. Prat:, Sheffield; Mr. Evans, Seaford; Dr. Robinson, Netley; Mr. Griffith, Shercock; Mr. Wigmore, London; Mr. Nourse, Brighton; Mr. White, London; Mr. Menzies, Edinburgh; Mr. Binks, Wakefield; Dr. Smith, Kimberley; Dr. Stokes, Barbadoes; Alpha, Warwick; L.R.C.P., Oldham; E., Sheffield; Scruple; Albans; W. H. R., London; E. S. E., Dartmouth; Medicus, York; Alpha, Nottingham; Medicus, Salisbury; The Treasurer, Rotherham Hospital; Medicus, Dublin; A. M. E., London; R. L. S., London; L.R.C.P.; J. F.; M. B., London; W. C. D.; M.R.C.S., Morley.

Manchester Guardian, Surrey Advertiser, Newcastle Chronicle, Metropolitan, East London Observer, Western Morning News, Cork Constitution, Birmingham Morning News, Dunfermline Press, Hastings Observer, Nottingham Express, Record, Goole Weekly Times, Northern Echo, Leamington Advertiser, and *West Sussex Gazette* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, MARCH 16TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Mar. 10	28·72	S.W.	38	40	...	47	35	0·06	Cloudy
,, 11	29·07	W.	39	43	...	51	38	0·10	Cloudy
,, 12	28·55	W.	38	39	...	43	33	0·65	Raining
,, 13	29·63	N.W.	35	37	...	48	32	0·45	Overcast
,, 14	29·59	W.	45	47	...	56	35	0·07	Overcast
,, 15	29·27	N.W.	42	42	...	51	41	...	Raining
,, 16	29·64	N.W.	38	41	...	52	34	...	Overcast

Medical Diary for the ensuing Week.

Monday, March 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. K. Parker, "On the Shoulder-girdle and Fore-limb of Vertebrata."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. Henry Smith, "On some Manifestations of Syphilis and their Treatment."—Dr. B. W. Richardson: A Description of two new Instruments for Artificial Respiration and Tracheotomy; also, a new Exhaustive and Injecting Instrument.

Tuesday, March 21.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. Adjourned Discussion on Syphilis.

Wednesday, March 22.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. K. Parker, "On the Shoulder-girdle and Fore-limb of Vertebrata."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Dickinson, "On the Pathology and Relations of Albuminuria."
HUNTERIAN SOCIETY.—8 P.M. Mr. Clement Lucas will exhibit a piece of Intestine with a Diverticulum.—Dr. Hilton Fagge, "On Paroxysmal Neuroses."

Thursday, March 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, March 24.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. K. Parker, "On the Shoulder-girdle and Fore-limb of Vertebrata."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Dickinson, "On the Pathology and Relations of Albuminuria."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. W. K. Bridgman, "On the Principles of Illumination."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Holmes, "On a Case of Excision of the Ankle-joint, illustrating the Utility of Linbart's Chisel."—Dr. Goodhart, "On a Case of Headache, Vomiting, Double Optic Neuritis, Blindness, ending in Recovery."—Mr. A. T. Norton, "On a Case of Cleft Palate; Treatment by Operation, with Artificial Uvula."

Saturday, March 25.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—
Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.